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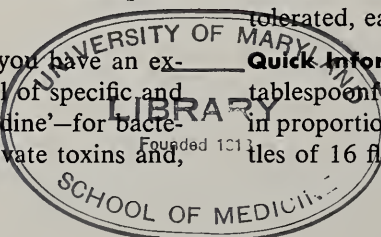
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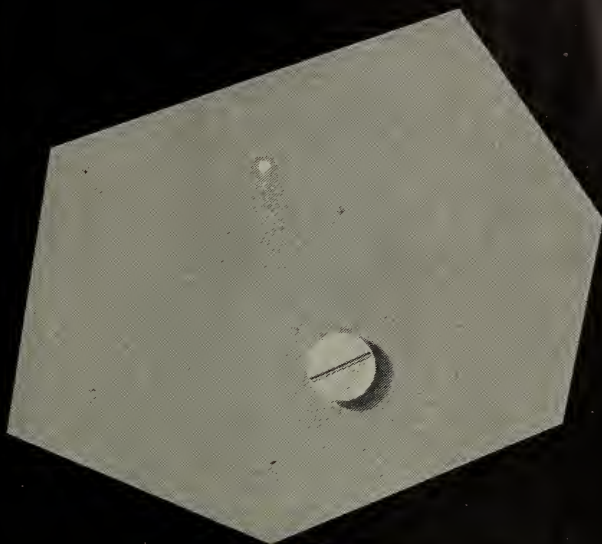
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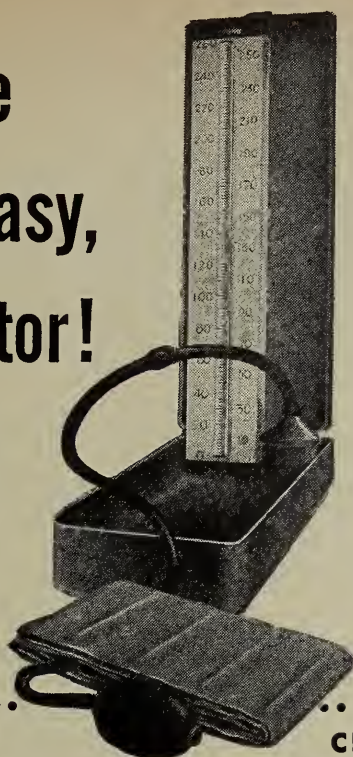
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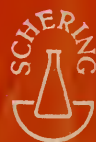
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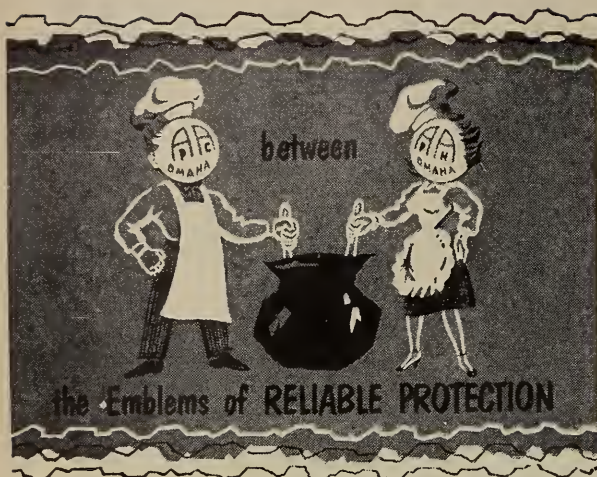
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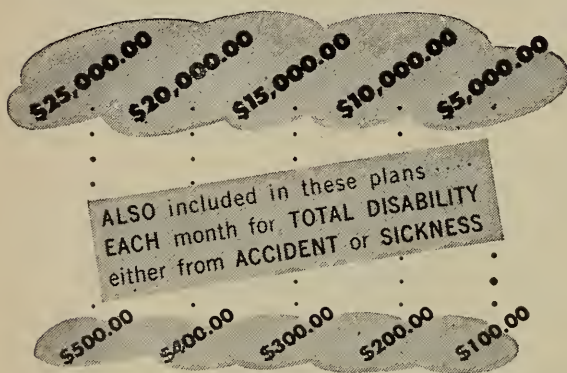


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Hospital Births, Admissions Rise As Demand for TB Care Declines

A record number of births and admissions to hospitals was established in 1953, while the number of persons seeking treatment in tuberculosis hospitals declined, the Council on Medical Education and Hospitals of the American Medical Association recently reported.

Hospital births totaled 3,307,182 in 1953 in comparison to the 3,170,495 born in hospitals in 1952, according to the council's 33rd annual report which appeared in a recent issue of the *Journal of the American Medical Association*.

This was the second successive year that hospital births totaled more than three million. They represented 84 per cent of the estimated 3,910,000 births in the United States during 1953 or a new baby born in a hospital every 9.5 seconds.

Total hospital admissions were 19,869,061, another all-time record. The previous high admission figure was in 1952, when 18,914,847 persons entered hospitals.

And to aid in caring for this influx of nearly a million new admissions, the 6,840 hospitals registered with the A.M.A. increased their bed capacity by 31,399 to 1,573,014.

This includes 1,113,004 beds in governmental hospitals and 460,010 in nongovernmental hospitals. The nongovernmental group cared for 74 per cent of all the patients, however.

The decline in the number of persons seeking treatment in tuberculosis sanatoriums was from 109,925 in 1952 to 108,471 in 1953. There were 107,181 cases of this type in 1951.

Admissions to psychiatric hospitals for the year jumped from 312,252 to 328,336, which was a significant rise considering that in the period from 1950 through 1952 there was an increase of only slightly more than 5,000. The report stated:

"While these institutions received only 1.7 per cent of the patients admitted, they maintained an average daily census of 719,335, which is greater than the combined patient load in all other registered hospitals. Thus, the average daily census is more fully indicative of the volume of service in the psychiatric field, where longer periods of hospitalization are necessarily required.

"The psychiatric hospitals in the nongovernmental group listed 87,794 admissions in the last year, whereas, the governmental section reported 240,542, including 190,694 in the psychiatric hospitals operating under state control."

The bed occupancy rate was highest in the psychiatric field, too, with 96.0 per cent. In other fields, isolation units had only a 47.2 per cent occupancy, tuberculosis 84.6, and general hospitals had a reduction from 74.1 per cent to 73.0. In this connection, the governmental general hospitals reported an aver-

(Continued on Page 12)

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Hospital Births, Admissions Rise As Demand for TB Care Declines

(Continued from Page 10)

age bed occupancy of 73.3 per cent, and the non-governmental general hospitals 72.7.

"It also should be noted," the report said, "that an average of 80 to 85 per cent is usually regarded as the maximum limit of operating efficiency in general hospitals. For all practical purposes, therefore, a general hospital reporting 80 per cent or more may be regarded as operating at capacity level."

Of the 6,840 hospitals accepted for A.M.A. registration, 4,704 are non-governmental units and 2,136

are under governmental control. When classified by control, the governmental division includes 392 federal hospitals, 550 state institutions, 713 county hospitals, 396 municipal and 85 city-county.

The average daily census increased in 1953 to 1,332,551 from 1,309,377 in 1952. This increase is in line with a steady rise which has occurred since 1949. The daily census includes 995,866 in the governmental hospitals and 336,685 in the nongovernmental group. Here again the treatment of psychiatric cases affected the governmental load with 623,105 in the state hospitals alone.

"In the last year the average length of stay per
(Continued on Page 18)



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†Kimble, S.T., and Stieglitz, E.J.: Geriatrics 7: 20, 1952.



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New Illness Resembling German Measles Described

An outbreak of a new, mild illness, characterized by a skin eruption, was described in a recent issue of the *Journal of the American Medical Association*.

The disease, prevalent in and around Boston in 1951, was found to be both infectious and contagious, according to three physicians who made a study of 18 cases and reported 2,450 cases seen by other physicians.

Although the condition had some of the features of German measles, careful study showed that it is probably an entirely new type of infection, the report stated.

The 18 patients studied by the physicians ranged in age from four months to 26 years. The majority of patients had a fever of about 102° F. which lasted one to two days and was accompanied by a sore throat, a generalized aching of muscles, and chills.

All the children, but only one of the three adults afflicted, exhibited varying degrees of skin eruption. The rash usually was most evident over the face and upper chest, appearing in most cases after onset of the other symptoms and within one or two days after the fever had subsided. Some of the patients suffered mucous membrane lesions and enlargement of their neck glands. None, however, appeared severely ill. Multiple cases appeared in two families.

A questionnaire regarding the new disease was sent to physicians in Massachusetts, the authors said. The 123 physicians who replied stated they had seen about 2,450 such cases between May and September 1951. According to the replies, the epidemic eruptive disease affected primarily children 10 years of age or younger, and was characterized by fever and a skin rash that appeared either during or after fever had subsided. Fever and the rash lasted at least 24 hours in most cases, and in many cases lesions of the throat were apparent. Multiple cases were not uncommon in a single family.

"There appears to be little doubt that the outbreak of illness described here represents an infectious and communicable disease entity," the doctors stated.

"Study of a group of 18 patients with the disease as well as results from a questionnaire circulated among practicing physicians who encountered the illness indicated that the exanthem represented a definite clinical entity that did not readily conform with the more commonly known exanthems.

"It may be concluded that the disease we have encountered in most of the patients, although it may share some features of certain common exanthems, probably is an infection *sui generis*."

The report was prepared by Dr. Franklin A. Neva, Pittsburgh, and Drs. Roy F. Fcemster and Ilse J. Gorbach, Boston.

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notably simpler in dosage regimen than whole root preparations or isolated alkaloids—usual dosage, 2 tablets (2 mg. each) at bedtime.

1. Gourzis, J. T.; Sonnenschein, R. R., and Barden, R.: Alterations in Cardiovascular Responses of the Dog Following Rauwiloid, An Alkaloidal Extract of *Rauwolfia serpentina*, *Proc. Soc. Exper. Biol. & Med.* 85:463 (Mar.) 1954.

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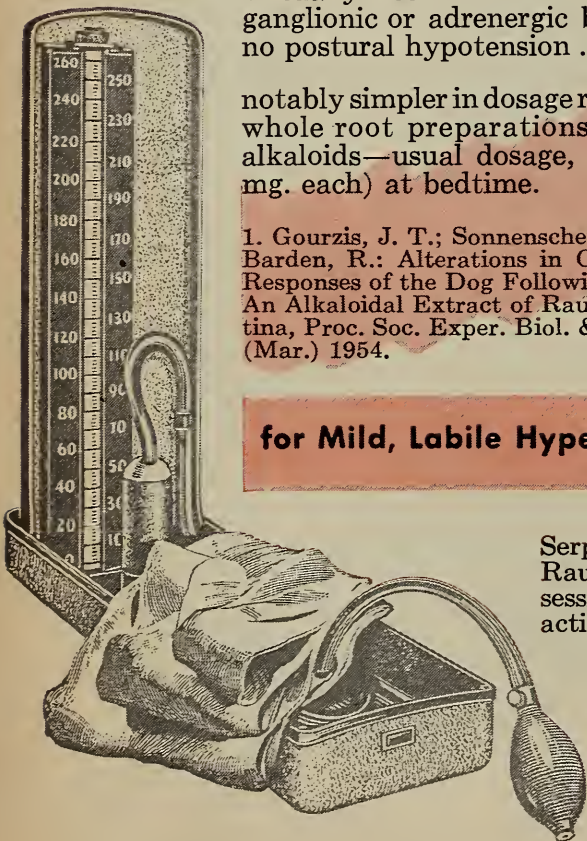
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produces prompt symptomatic relief . . . overcomes headache, tachycardia, and apprehension . . . produces a sense of tranquil well-being . . .

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Each tablet contains 1 mg. Rauwiloid and 250 mg. hexamethonium. Initial dosage, ½ tablet q.i.d., before meals and at bedtime; after two weeks (for Rauwiloid effect) increase by small increments, not oftener than twice a week, until desired effect is obtained.

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- Hypertensive toxemia of pregnancy.

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Hospital Births, Admissions Rise As Demand for TB Care Declines

(Continued from Page 12)

patient was reduced in all general hospital divisions except the state group. The reduction was most prominent in the federal general hospitals, which reported 23.6 days compared with 26.2 in 1952. While the state hospital rate increased from 14.1 to 14.8 days, the average stay was reduced from 11.9 to 11.2 in the county units, from 11.7 to 11.5 in the municipal hospitals, and from 9.0 to 8.8 in the city-county group," the report noted.

The average length of stay in all general hospitals

was reduced from 9.8 days in 1952 to 9.3 days in 1953. Governmental general hospitals had a reduction from 16.4 to 15.1 and nongovernmental from 7.5 to 7.4.

For every 1,000 admissions in 1953, 941 were assigned to general hospitals, 17 to psychiatric institutions, 5 to tuberculosis sanatoriums, 4 to maternity hospitals, 3 to industrial units, 6 to eye, ear, nose and throat, 8 to children's hospitals, 2 to orthopedic, 1 to isolation, 2 to convalescent units, 6 to hospital departments of institutions, and 4 to other hospitals.

The report, collected for evaluation and assistance

(Continued on Page 26)

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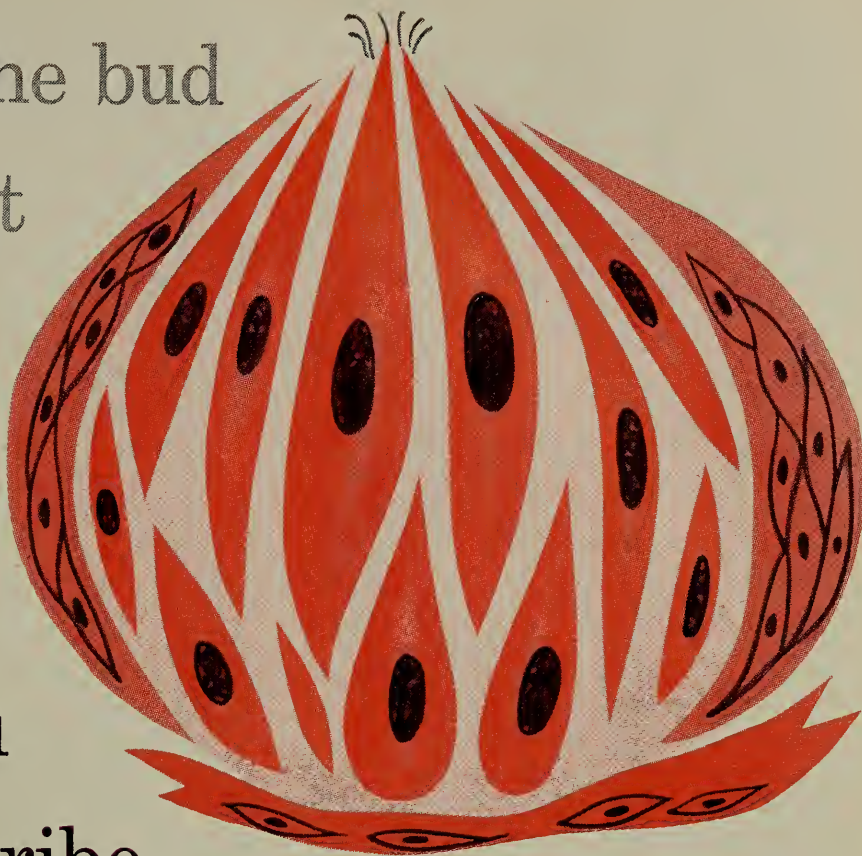
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Record Number of Physicians Licensed To Practice Medicine

An all-time record number of physicians—218,522—were licensed to practice medicine in the United States at the close of 1953, it was disclosed in the 52nd annual report on medical licensure of the American Medical Association's Council on Medical Education and Hospitals.

Of this total, 156,333 were engaged in private practice, 6,677 were engaged in full-time research and teaching and were physicians employed by insurance companies, industries, and health departments, 29,161 were interns and residents in hospitals and those engaged in hospital administration, 9,311 were retired or not in practice, and 17,040 were in government service.

According to the report, during 1953 there were 14,434 licenses to practice medicine issued by the 48 states, the District of Columbia, Alaska, Canal Zone, Guam, Hawaii and Puerto Rico—an increase of 1,206 over the number issued during 1952 and the third largest number issued in the history of this country. Of this total, 6,565 were granted after written examination and 7,869 by reciprocity or endorsement of state licenses or the certificate of the National Board of Examiners. The majority of those issued by reciprocity or endorsement were to already licensed physicians who moved their practice from one state to another.

The data presented in the report showed that last year 7,276 physicians received their first license to practice medicine. In the same period there were approximately 3,421 deaths of physicians reported, so that there was a net gain of 3,855 in the physician population in the United States and its territories and outlying possessions. During 1952, there was a net gain of 2,987.

The greatest number of licenses issued in 1953 was granted by California—1,977. New York was second with 1,348 and more than 500 physicians were registered in Illinois, Ohio, Pennsylvania and Texas. Less than 50 licenses were issued by Nevada, Delaware, Idaho, Montana, New Hampshire, North Dakota, South Dakota, Vermont, and Wyoming.

From 1935 through 1953, a total of 207,744 licenses to practice medicine was issued in the United States. During the same period there were 119,510 additions to the medical profession—an increase reflecting accelerated programs in medical schools, expanded facilities, and the licensure of foreign trained physicians.

The excellent rating of the nation's and Canada's approved medical schools was pointed up by the number of applicants who successfully passed examinations. Thirteen per cent of the total number of applicants who took written examinations for licensure failed, the report stated. Only 3.8 per cent of the graduates of approved medical schools in the

United States and 4.1 per cent of those of approved Canadian medical schools failed. In contrast, 50 per cent of those graduated from now extinct medical schools in the United States failed, as did 45.5 per cent of the graduates of foreign medical faculties, 70.2 per cent of graduates of unapproved U. S. medical schools no longer in existence, and 13.4 per cent of graduates of schools of osteopathy.

The current report on medical licensure revealed that in many states the licensure of foreign trained physicians has been given serious consideration by the authorities and that methods are being developed to provide for the licensure of such physicians which will not lower the standards of medical practice in the United States.

However, the report stated, the Council on Medical Education and Hospitals of the American Medical Association, the Association of American Medical Colleges, the Federation of State Medical Boards, and other interested agencies now are engaged in discussions looking toward a reevaluation of the problem created by the influx of foreign trained physicians migrating to the United States to pursue their profession.

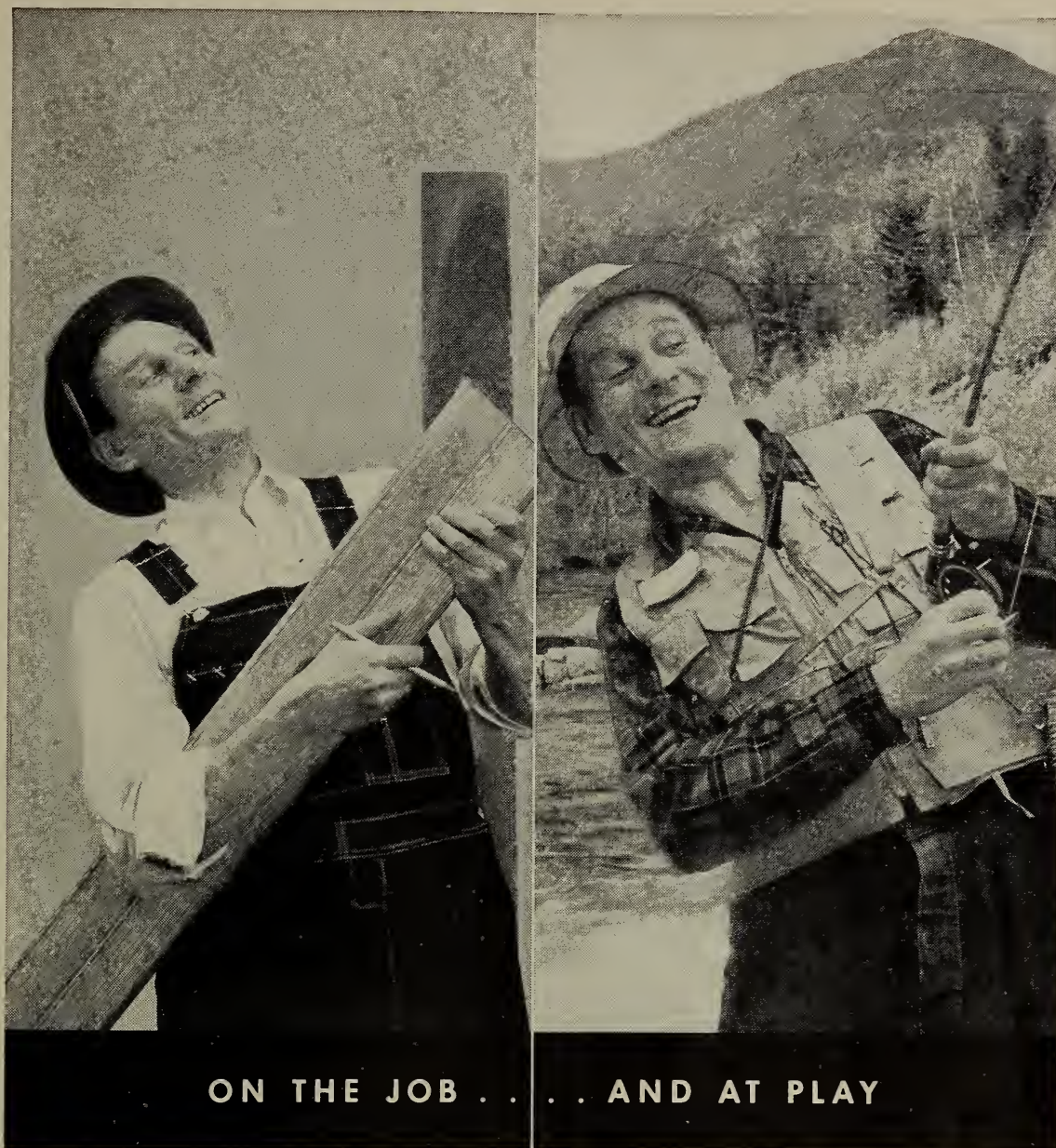
The number of graduates of foreign faculties of medicine examined began increasing in 1936, and by 1940 there were over three times as many tested as in 1936, according to the report. Beginning in 1944 the numbers examined began to decrease until 1951, when there was a noticeable increase, an increase again recorded in 1952 and 1953.

During 1953, 1,463 graduates of 175 foreign medical schools and seven licensing corporations of foreign countries were examined by 36 licensing boards. A total of 796 successfully passed the examinations; failures numbered 667, or 45.5 per cent. At no time during the last 24 years did fewer than 30.7 per cent of such graduates fail in a given year, it added.

"This extremely high percentage of failures is a primary factor in the cautious attitude that has been maintained by licensing boards in admitting foreign graduates to the licensing examination," the report said.

The largest number of foreign graduates were examined by New York—450; Illinois examined 411, California 148, and Ohio 105. Foreign trained physicians may apply for licensure to all but 11 licensing boards, according to the report. Most of the boards have stipulations which must be complied with prior to licensure examination.

The report, which appeared in a recent issue of the *Journal of the American Medical Association*, was prepared by Dr. Edward L. Turner, secretary of the Council on Medical Education and Hospitals of the A.M.A., and Mrs. Anne Tipner, assistant to the secretary. Both are from Chicago.



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Hospital Births, Admissions Rise as Demand for TB Care Declines

(Continued from Page 18)

in the improvement of hospital service, was prepared by Dr. F. H. Arestad, associate secretary of the council, and Miss Mary A. McGovern, a member of the council's staff.

A GOOD SLEEP. Fear of not getting enough sleep, drilled into an individual from childhood, can keep an individual awake nights, according to an article in the American Medical Association's *Today's Health* magazine.

Children Should Be Taught to Be Right-Handed

Children should be encouraged to be right-handed when they are about one year of age, a medical consultant wrote in a recent issue of the *Journal of the American Medical Association*.

"The infant has no definite sidedness, either left or right; he is ambilateral, not ambidextrous, and both sides are inept," he stated. "A one-sided pattern begins to emerge at about 18 months and continues to develop for many years as one-sided skills are learned.

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(Continued on Page 36)

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Surgical Anatomy and Clinical Surgery, Two Weeks, August 23, October 25

Surgery of Colon and Rectum, One Week, September 13

Basic Principles in General Surgery, Two Weeks, Sept. 20

Breast and Thyroid Surgery, One Week, October 25

Thoracic Surgery, One Week, October 11

Esophageal Surgery, One Week, October 4

General Surgery, Two Weeks, October 4, One Week, October 4

Gallbladder Surgery, Ten Hours, October 25

Fractures and Traumatic Surgery, Two Weeks, October 25

GYNECOLOGY—Office and Operative Gynecology, Two Weeks, September 20

Vaginal Approach to Pelvic Surgery, One Week, Sept. 13

OBSTETRICS—General and Surgical Obstetrics, Two Weeks, October 4

MEDICINE—Two-Week Course, September 27

Electrocardiography and Heart Disease, Two Weeks, Oct. 11

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RESERVATIONS at the Fresno Hacienda, or nearby motels/hotels, will be handled through the California Medical Association's Housing Bureau, 450 Sutter Street, San Francisco. Rooms at the Hacienda are available in limited numbers. Please make a first, second, and third choice. In order to assure the type of accommodation which you desire, please place your reservation early.

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| 3. Environmental Aspects of School Health | 7. School Physician and School Health |
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Polio Family Contact Risk Greater In Paralytic Cases

The probability that more than one case of poliomyelitis will develop in a family is greater when the initial case is of the paralytic type than when it is nonparalytic, a recent issue of the *Journal of the American Medical Association* reported.

In addition, the prognosis of the subsequent cases that develop in the affected households is worse both for life and for paralysis if the initial case is paralytic, according to Drs. Morris Siegel and Morris Greenberg, Brooklyn, N. Y. The doctors based their conclusions on a study of poliomyelitis cases in New York City from 1949 through 1952.

One study made by the doctors concerned the type of multiple household infections in 167 families. There were 158 families with two cases of polio, seven with three cases, and two with four cases. In the 49 families where the initial case of polio was nonparalytic, 77 subsequent cases were nonparalytic; in the 82 families in which the initial case was of the spinal paralytic type, 71 subsequent cases were of the same type, and in the 36 families where the initial case was of the bulbar paralytic type, 30 subsequent cases also were of this type.

There were no subsequent cases of polio in persons over 39 years of age whether the initial case was paralytic or nonparalytic. There were only two subsequent cases of polio in persons over 19 years of age when the initial case was nonparalytic, as compared to 20 when it was paralytic.

"When the initial case was nonparalytic, other cases in the same family were also nonparalytic in 73 per cent of the instances," the doctors wrote. "On the other hand, when the initial case was paralytic, the subsequent cases were also paralytic in 70 per cent of the cases.

"The clinical importance of the foregoing data was reflected in the case fatality among subsequent cases. Those associated with a nonparalytic initial case had no deaths in 55 subsequent cases, in contrast to 17 deaths in 123 subsequent cases (13.8 per cent) following an initial case that was paralytic. In other words, all of the fatalities among subsequent cases occurred in the latter group.

"Therefore, the prognosis of multiple clinical infections in the household had some relationship to the type of disease manifested in the first case. If it were paralytic, other cases in the family were more apt to be paralytic and to have a greater case fatality than if the original case were nonparalytic."

A second study made by the doctors concerned the incidence of multiple cases of poliomyelitis during 1949 in 2,338 families in which 2,446 cases occurred. The rate of multiple infections of household contacts was 1,278 per 100,000. This was about 40 times greater than the rate of 31 per 100,000 for the general population, the doctors stated. Again it was dis-

(Continued on Page 42)

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Initial Improvement	Complete Relief	Remarks
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48 hrs.	96 hrs.	Gay &
24 hrs.	72 hrs.	Gay &
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References: 1. Flood, J. H.: Bull. Guthrie Clinic 21: 3, 1951. 2. Gay, L. N., and Murgatroyd, G. W., Jr.: J. Allergy 23: 215, 1952. 3. Falk, M. S., et al.: J. Invest. Dermat. 18: 307, 1952.

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Only Deodorant Creams or Liquids Control Perspiration

Soap and water do not prevent perspiration odor—only deodorant creams or liquids will do the trick—according to Mrs. Veronica L. Conley, Chicago, assistant secretary of the American Medical Association's Committee on Cosmetics.

Soap and water will remove some bacteria from the armpits, inhibiting perspiration and leaving the area odor-free for a while, Mrs. Conley wrote in a recent issue of *Today's Health* magazine, published by the A.M.A. But, as it is impossible to remove all the bacteria from the skin by this method, the remaining bacteria resume growth in a short time and the cycle in the production of perspiration odor begins again.

"Prolonged deodorant action comes from leaving behind on the skin a substance that continually inactivates remaining bacteria," Mrs. Conley stressed. "Effective deodorant creams and liquids do this; ordinary soap and water do not."

Some people still cling to the old idea that washing daily with soap and water is adequate protection against perspiration odor, Mrs. Conley stated, adding:

"They feel that perspiration odor is no more or less than a sign of uncleanness. There is evidence that a few people need no more protection than that

afforded by washing the armpits twice a day with ordinary soap and water, particularly if the areas have been shaved. But for most people, ordinary washing is not sufficient.

"There is some variation in intensity and character of perspiration odor in different people. In children, no perspiration odor is present because the apocrine glands are not functioning. In older people, the gland activity is reduced, and there is usually considerably less perspiration odor. A few people, even during the period of greatest glandular activity, have noticeably less perspiration odor than their fellows and require less protection."

Mrs. Conley pointed out that as soap would be a logical product to use as a deodorant, researchers have been and are trying to find a chemical to add to soap which would make it an effective deodorant. Thus far, no such chemical has been proved to be completely satisfactory, she added.

POLIO RECOVERY. Psychological, emotional, educational and vocational guidance is just as important as medical treatment in effecting recovery from poliomyelitis, it was stated in the American Medical Association's *American Journal of Diseases of Children*.

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Correction of Improper Diet May Cure Delusions

Correction of a deficient diet may cure the delusion of being parasitized by insects, it was reported in a recent issue of the *Journal of the American Medical Association*.

Four cases in which patients described bizarre habits of fictional parasites upon their bodies were discussed by Dr. Irma Aleshire, Iowa City, Iowa. All the patients suffered from pellagra, a deficiency disease, and all were cured of their delusions after institution of a proper, antipellagrous diet.

According to Dr. Aleshire, the patients believed the imaginary insects to cause burning, crawling, itching sensations to their skin. In attempts to alleviate the sensations, the patients scratched themselves until their skin bled, or dug small holes in

their skin with their fingernails. They also washed their clothing and bedclothing daily, bathed themselves frequently, and applied various insecticidal preparations to their bodies.

"It is significant that a history of poor eating habits was elicited on questioning the only patients with delusions of parasitosis whom I have seen in the past 11 years, and that correction of their eating habits cured their affliction," Dr. Aleshire stated.

"The fact that crawling sensations and burning pain as from the bite of an insect were present may have led the patients to the wrong assumption that such symptoms were due to the presence of insects. Fantastic irrationalization as to the nature and habits of the supposed parasites may be connected with the fact that the central nervous system is particularly vulnerable to malnutritive changes, as manifested in pellagra."

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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

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BOOKS RECEIVED

ANNUAL REVIEW OF MEDICINE—Vol. 5. Windsor C. Cutting, Editor, Stanford University School of Medicine; and Henry W. Newman, Associate Editor, Stanford University School of Medicine. Annual Reviews, Inc., Stanford, Calif. 490 pages, \$7.00.

APHASIA THERAPEUTICS. Mary Coates Longerich, Ph.D., and Jean Bordeaux, Ph.D. The Macmillan Company, New York, 1954. 185 pages, \$3.75.

BIOCHEMISTRY OF CLINICAL MEDICINE, THE. William S. Hoffman, Ph.D., M.D., Professorial Lecturer in Medicine, University of Illinois College of Medicine. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1954. 681 pages, \$12.00.

CHILD, HIS PARENTS AND THE PHYSICIAN, THE. Hale F. Shirley, M.D., Professor of Pediatrics and Psychiatry, Director of the Child Psychiatry Unit, Stanford University School of Medicine. Charles C. Thomas, Publisher, Springfield, Ill., 1954. 159 pages, \$3.75.

ECZEMAS, THE—A Symposium by Ten Authors. L. J. A. Loewenthal, M.D., M.R.C.P., D.T.M. and H., Lecturer in Dermatology, University of Witwatersrand, formerly Honorary Assistant Dermatologist, Hospital for Cancer and Skin Diseases, Liverpool. E. & S. Livingstone, Ltd., Edinburgh; distributed by Williams & Wilkins, Baltimore, 1954. 267 pages, \$7.50.

EMOTIONAL PROBLEMS OF CHILDREN, THE—A Guide for Parents. Harry Joseph, M.D., and Gordon Zern. Crown Publishers, Inc., 419 Fourth Ave., New York 16, N. Y., 1954. 310 pages, \$3.75.

ENDEMIC GOITER—The Adaptation of Man to Iodine Deficiency. John B. Stanbury, M.D., Gordon L. Brownell, Ph.D., Douglas S. Riggs, M.D., and Hector Perinetti, M.D., Juan Itoiz, Ph.D., Enrique B. Del Castillo, M.D. Harvard University Press, Cambridge, Mass., 1954. 209 pages, \$4.00.

FRENCH'S INDEX OF DIFFERENTIAL DIAGNOSIS—Seventh Edition. Arthur H. Douthwaite, M.D., Senior Physician, Guy's Hospital; Honorary Physician, All Saints' Hospital for Genitourinary Diseases. The Williams and Wilkins Company, Baltimore, 1954. 1046 pages, 731 illustrations, 200 in color, \$20.00.

FUNDAMENTALS OF OTOLARYNGOLOGY—A Textbook of Ear, Nose and Throat Diseases—2nd Edition. Lawrence R. Boies, M.D., Clinical Professor of Otolaryngology, Director of Division of Otolaryngology, University of Minnesota Medical School. W. B. Saunders Company, Philadelphia, 1954. 487 pages, \$7.00.

HANDBOOK FOR DIABETIC CHILDREN. Alfred E. Fischer, M.D., Associate Attending Pediatrician, Mount Sinai Hospital, New York City, and Dorothea L. Horstmann, Instructor in Dietetics, Mount Sinai Hospital, New York City, Intercontinental Medical Book Corp., 381 Fourth Ave., New York 16, N. Y., 1954. 63 pages, \$1.75.

HANDWRITING AND THE EMOTIONS. Malford W. Thewlis, M.D., Director, Thewlis Clinic, Wakefield, R. I., and Isabelle Clark Swezy, Palo Alto, Calif. American Graphological Society, Inc., 2 Hamilton Avenue, Cranford, N. J., 1954. 264 pages, 198 illustrations, \$8.00.

HYPERTENSION AND NEPHRITIS—Fifth Edition, Enlarged and Thoroughly Revised. Arthur M. Fishberg, M.D., Director of Medicine, Beth Israel Hospital, New York, Clinical Professor of Medicine, New York University Postgraduate Medical School. Lea & Febiger, Philadelphia, 1954. 986 pages, \$12.50.

ILLUSTRATED REVIEW OF FRACTURE TREATMENT. Frederick Lee Liebolt, A.B., M.D., Sc.D., LL.D., Attending Surgeon in Charge of Orthopedics, New York Hospital, Associate Professor of Clinical Surgery (Orthopedics), Cornell University Medical College. Lange Medical Publications, Los Altos, Calif., 1954. 229 pages, \$4.00.

INTRODUCTION TO PSYCHIATRY. O. Spurgeon English, M.D., Professor and Chairman, Department of Psy-

chiatry, Temple University School of Medicine; and Stuart M. Finch, M.D., Assistant Professor of Psychiatry, Temple University School of Medicine, W. W. Norton, New York, 1954. 621 pages, \$7.00.

MANUAL OF OTOTOLOGY, RHINOLOGY AND LARYNGOLOGY, A—Fourth Edition. Howard Charles Ballenger, M.D., Professor of Otolaryngology Emeritus and recently Chairman of the Department of Otolaryngology; and John J. Ballenger, B.S., M.S., M.D., Associate, Department of Otolaryngology, both from Northwestern University Medical School. Lea & Febiger, Philadelphia, 1954. 365 pages, \$6.00.

MANUAL OF TROPICAL MEDICINE, A—Second Edition. Thomas T. Mackie, M.D., Chairman, American Foundation for Tropical Medicine; George W. Hunter III, Ph.D., and C. Brooke Worth, M.D. W. B. Saunders Company, Philadelphia, 1954. 907 pages, 304 illustrations, \$12.00.

MODERN TRENDS IN DERMATOLOGY (Second Series). Edited by R. M. B. MacKenna, M.A., M.D. (Camb.), F.R.C.P. (Lond.), Physician in Charge, Dermatological Department, St. Bartholomew's Hospital. Paul B. Hoeber, Inc., New York, 1954. 338 pages, \$12.00.

PERIPHERAL CIRCULATION IN MAN—A Ciba Foundation Symposium. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Jessie S. Freeman, M.B., B.S., D.P.H., and assisted by Joan Etherington. Little, Brown and Company, Boston, 1954. 219 pages, \$6.00.

PHARMACOLOGIC PRINCIPLES OF MEDICAL PRACTICE, THE—3rd Edition—A textbook on Pharmacology and Therapeutics for Medical Students, Physicians, and the Members of the Professions Allied to Medicine. John C. Krantz, Jr., Professor of Pharmacology, School of Medicine, University of Maryland; and C. Jelleff Carr, Professor of Pharmacology, School of Medicine, University of Maryland, The Williams and Wilkins Company, Baltimore, 1954. 1183 pages, \$12.00.

PSYCHIATRIC INTERVIEW, THE. Harry Stack Sullivan, M.D.; edited by Helen Swick Perry and Mary Ladd Gawel. W. W. Norton & Company, Inc., New York, 1954. 246 pages, \$4.50.

PSYCHOANALYSIS AND THE EDUCATION OF THE CHILD. Gerald H. J. Pearson, M.D., Dean, Institute of the Philadelphia Association for Psychoanalysis. W. W. Norton & Company, Inc., 1954. 357 pages, \$5.00.

SEVENTY-FIVE YEARS OF MEDICAL PROGRESS, 1878-1953. Louis H. Bauer, M.D., Secretary-General, The World Medical Association, Past President, American Medical Association. Lea & Febiger, Philadelphia, 1954. 286 pages, \$4.00.

SURGICAL UROLOGY—A Handbook of Operative Surgery. R. H. Flocks, M.D., Professor and Head, Department of Urology, and David Culp, M.D., Assistant Professor of Urology, both from the State University of Iowa College of Medicine. The Year Book Publishers, Inc., 200 East Illinois St., Chicago, 1954. 392 pages, \$9.75.

SYNOPSIS OF ANESTHESIA, A—3rd Edition. J. Alfred Lee, M.R.C.S., L.R.C.P., M.M.S.A., D.A., F.F.A.R.C.S., Consultant Anesthetist to the Southend-on-Sea Hospital, etc. The Williams and Wilkins Company, Baltimore, 1953. 483 pages, \$3.50.

SYNOPSIS OF CHILDREN'S DISEASES, A. John Rendle-Short, M.A., M.B. (Cantab.), M.R.C.P., D.C.H., Senior Registrar, Department of Child Health, Welsh National School of Medicine. John Wright & Sons, Ltd., Bristol. Distributed through Williams and Wilkins Company, Baltimore, 1954. 608 pages, \$7.00.

SYNTHESIS OF HUMAN BEHAVIOR, A—An Integration of Thought Processes and Ego Growth. Joseph C. Solomon, Assistant Clinical Professor of Psychiatry, University of California; Consultant, Mt. Zion Hospital. Grune & Stratton, New York, 1954. 265 pages, \$5.50.

TRANSFERENCE—Its Meaning and Function in Psychoanalytic Therapy. Benjamin Wolstein, Ph.D., Clinical Psychologist, Low Cost Psychoanalytic Service, W. A. White Institute of Psychiatry, Psychoanalysis and Psychology. Grune & Stratton, New York, 1954. 206 pages, \$5.00.

WINE AS FOOD AND MEDICINE. Salvatore P. Lucia, A.B., M.D., Sc.D., F.A.C.P., Professor of Medicine, University of California School of Medicine. The Blakiston Company, Inc., New York, 1954. 149 pages, \$3.00.

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(Continued from Page 26)

sided, the child should be encouraged to right-sidedness from the very beginning. According to this view, it is wrong to let the child choose for himself, as there is a 50 per cent chance that he may accidentally select the wrong side. However, this encouragement must be done patiently and kindly, not forcefully. Otherwise, negativism is excited in the child that may in itself lead to left-handedness and other personality difficulties.

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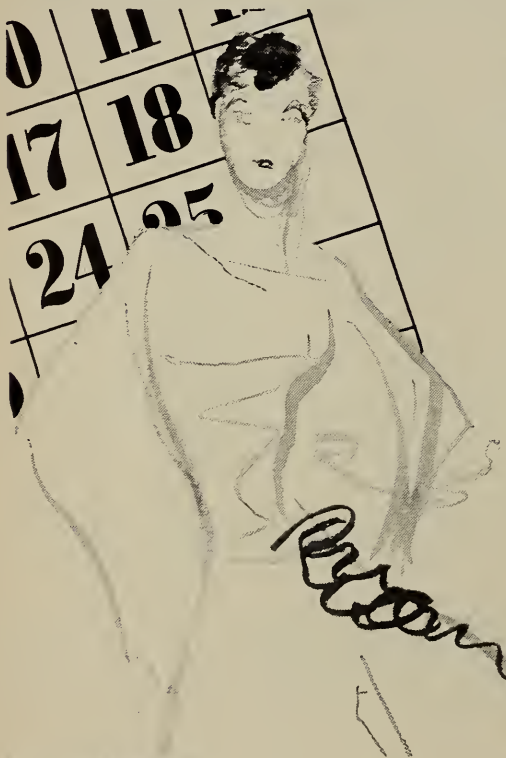
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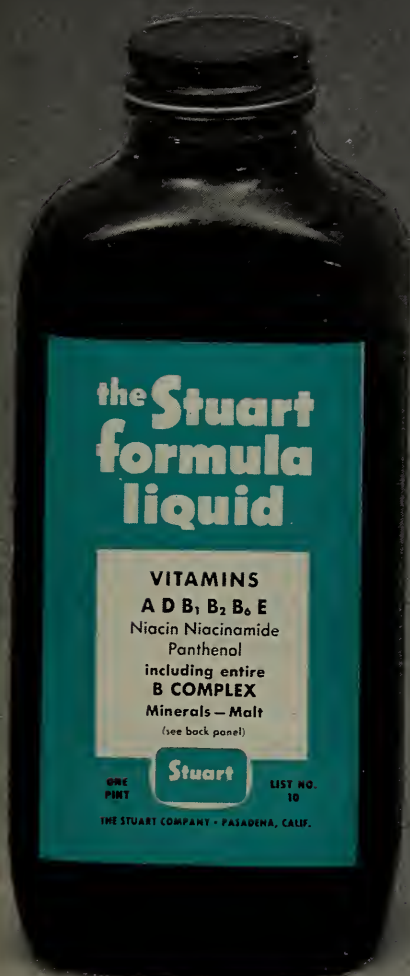
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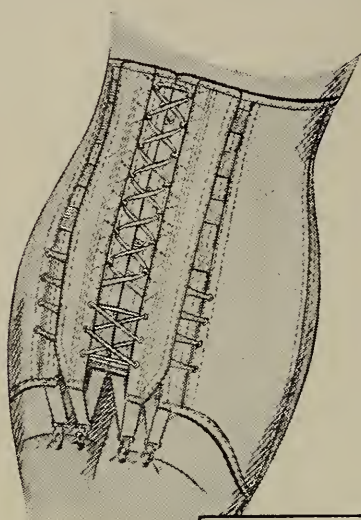


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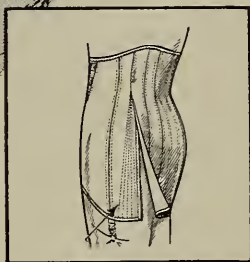
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Excessive Oxygen Administration Believed Related to Eye Disease

Excessive administration of oxygen to premature infants is believed directly related to the development of a serious eye disease which may result in blindness, it was reported in a recent issue of the *Journal of the American Medical Association*.

The disease, called retrolental fibroplasia, may be controlled by severely limiting the concentration of oxygen given to premature infants, a restriction which does not appear harmful, in the opinion of Drs. Jonathan T. Lanman, Loren P. Guy, and Joseph Dancis, New York. They said:

"Retrolental fibroplasia was first recognized as a disease of premature infants in 1942; it is now first among the causes of blindness in children in the United States, and is the foremost problem other than death itself in the care of premature infants."

The doctors based their conclusions on a year-long study of 64 premature infants admitted to the Bellevue Hospital Premature Nursery. The babies weighed between two and four pounds at birth. Thirty-six of the infants were given a high concentration of oxygen in their incubators and 28 received a low concentration.

In the groups receiving a high oxygen concentration there were eight cases of irreversible retrolental fibroplasia, according to the doctors. Six of these infants are believed to have no useful vision, while two may have useful vision in one eye, they added.

In the groups of infants receiving a low oxygen concentration, oxygen was administered only when breathing difficulty occurred.

According to the physicians, early reversible stages of the condition developed in 22 (61 per cent) of the infants receiving a high concentration of oxygen. Only two babies in the groups receiving a low concentration of oxygen showed early stages of the disease.

All groups of patients received identical incubator care, formulas and vitamin therapy. Twenty per cent of the groups receiving a high oxygen concentration died, compared with 30 per cent in the groups receiving low oxygen. The doctors pointed out, however, that five of the infants in the groups getting a low oxygen concentration died of causes not connected with oxygen therapy, thereby reducing the death rate to 20 per cent, also.

The correlation between oxygen therapy and the development of the disease is uncertain, the doctors said. They added that the condition may be caused by excessive oxygen damaging the developing retinal blood vessels and the nerve cells of the retina.

"In a comparison of liberal and restricted oxygen therapy in premature infants, irreversible retrolental fibroplasia appeared in infants in the group with high oxygen but not in the group with low

(Continued on Page 50)

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Polio Family Contact Risk Greater In Paralytic Cases

(Continued from Page 23)

closed that if the initial case were paralytic, the incidence of subsequent paralytic cases was higher.

"The explanation of these results is speculative," the doctors concluded. "The practical consideration seems fairly clear. First, the clinical type of disease that is first seen in a household is of some prognostic significance with respect to the occurrence of other cases, their clinical types, and case fatality. Second, the need for protection of contacts is greater

if the initial case is paralytic than if it is nonparalytic."

The doctors are associated with the Department of Environmental Medicine and Community Health, State University of New York, College of Medicine, and the Bureau of Preventable Diseases, Department of Health, New York City.

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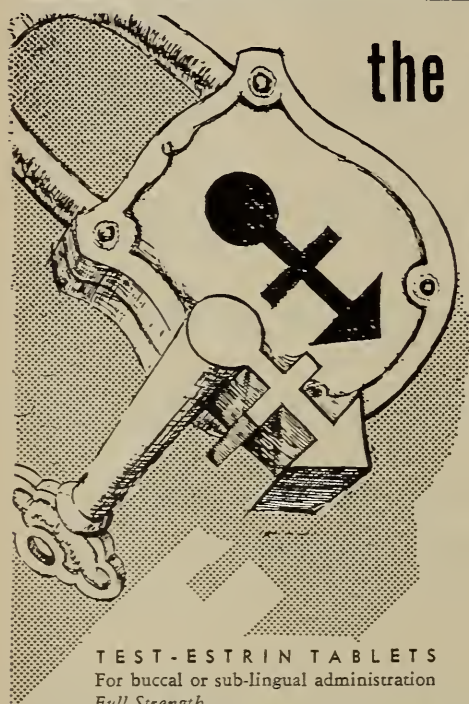
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New Drug Promises Relief from Severe Pain

A new drug, already shown to be effective in controlling nausea, now promises to relieve pain in patients who no longer get adequate help from large doses of narcotics.

The new drug chlorpromazine was found "useful" in such cases by five Illinois doctors who reported on their findings in a recent issue of the *Journal of the American Medical Association*.

They said 22 of 28 patients treated with chlorpromazine in addition to narcotics or sedatives which had not helped alone were given "satisfactory relief" from severe abdominal, bone and nerve pain. Narcotics requirements also were reduced.

Their study confirms earlier reports that the drug, originally developed by a French laboratory, relieves nausea and vomiting, they said. Four of five patients reported complete relief from nausea. The other was relieved of nausea but only slightly relieved of vomiting.

Two Canadian doctors reported earlier this year they had used the drug with "pronounced effect" in quieting severely excited patients without making them confused or otherwise inaccessible to psychotherapy.

The latest study was made on patients who were

all "seriously ill." All had severe pain and all but one had cancer.

Of the 18 hospitalized patients in the group, 14 were "satisfactorily relieved" by chlorpromazine, one got fair relief, and one reported no relief. Two other patients defaulted in taking medication.

Of the 10 outpatients studied, eight were relieved and two reported no effect. A "singularly good effect" was reported by the two outpatients with cancer.

Some patients whose pain was not actually changed "seemed to be more relaxed and less reactive to their pain," the physicians said. "They spoke of their pain as an objective phenomenon; that is, they no longer minded the pain, even though it was still present."

Except for drowsiness, side-effects were "minimal." Ten of the 18 hospitalized patients reported drowsiness, five reported "dry mouth," and one suffered wild dreams, which may not have been caused by the drug, they said.

The report was made by Drs. Max S. Sadove, Myron J. Levin, Raymond F. Rose, Lester Schwartz and Frederick W. Witt, of the Veterans Administration Hospital, Hines, Ill., and the University of Illinois College of Medicine, Chicago.

Gases from Phosphorus Bombs Cause Suffocation

Gases from incendiary phosphorus bombs used in modern warfare can cause suffocation, it was reported recently in the *Archives of Otolaryngology*, published by the American Medical Association.

Following air raids in Berlin during World War II, numerous patients with signs of severe suffocation were admitted to the Berlin University Hospital, according to Dr. Heinz G. A. Bayer, who formerly was associated with the hospital. Immediate tracheotomies were necessary to save the lives of these patients, who had tried to extinguish fires caused by incendiary phosphorus bombs.

As the phosphorus seemed to be responsible for the suffocation, an investigation was started whereby guinea pigs were poisoned by the burning of white phosphorus. Results disclosed inflammation and destruction of the covering of the skin and mucous membranes of the trachea and larynx, and bronchopneumonic spots in the lungs, he stated.

These effects, Dr. Bayer explained, were the result of oxides produced by the burning of the phosphorus. When these oxides came in contact with the mucous membranes of the respiratory tract, they extracted water and oxygen from the tissues and formed acids which cauterized the membranes and in combination caused suffocation.

"Phosphorus bombs were used with considerable success during World War II and in Korea," Dr. Bayer pointed out. "According to the modern conception of warfare, civilians are also exposed to the effects of phosphorus bombs.

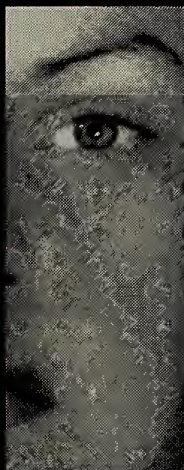
"Complete protection against all kinds of gases used under war conditions is afforded by a well-constructed gas mask. However, because of a shortage of material, and possibly the expense involved, gas masks cannot be supplied to every person. There is, however, no cause for undue alarm; experience has proved that the toxic effects of the fumes emanating from a phosphorus-containing incendiary bomb can be adequately counteracted by breathing through a wet towel or a wet handkerchief.

"More effective protection against phosphorus gases is afforded if the towel or handkerchief is soaked in a solution of potassium permanganate. The oxides of phosphorus are converted into acids within the wet towel, and these acids cannot penetrate into the respiratory system, and hence cannot produce harmful effects."

Dr. Bayer is now specialist in charge of the ear, nose and throat department, Civil Hospital, Kandy, Ceylon.

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Chamber of Commerce Puts Out Book on Modern Health Insurance

A new book, entitled "A Look at Modern Health Insurance," has just been published by the U. S. Chamber of Commerce, 1615 H Street, N.W., Washington 6, D. C. It presents the most complete up-to-date picture of the present status of voluntary health insurance in the United States, edited by a special committee of the Chamber of Commerce of the United States.

It is a symposium of articles by noted authorities in every aspect of health insurance.

The purpose of the book as outlined by the chairman of the committee is to make available a relatively complete story of the entire structure so that students of the subject may review this complex, diverse, and rapidly changing picture in one book. This objective has been effectively achieved.

A brief history of the development of voluntary health insurance is followed by a review of the nation's health record, the basic principles of health insurance, distribution of such insurance, the Blue Cross and Blue Shield movements, and other significant material. All physicians whose professional future depends in large measure on the nature of developments in this changing field should study this book and refer to it frequently as a text of authentic information.

—The A.M.A. Secretary's Letter

Excessive Oxygen Administration Believed Related to Eye Disease

(Continued from Page 38)

oxygen. Reversible, vascular stage lesions occurred in both groups, but with nine times the frequency in the group with high oxygen concentrations. Excluding infants dying of recognized causes with no known relationship to oxygen therapy, the mortality rates in the groups with both high and low oxygen concentrations were the same.

"We believe that retrolental fibroplasia is directly related to the excessive administration of oxygen and can be controlled by severely limiting oxygen therapy to premature infants. Such restriction does not appear harmful," they concluded.

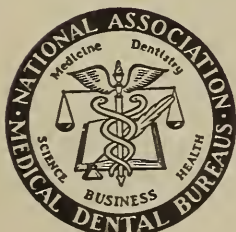
AUTOMOBILE INJURIES. The possibility of abdominal injuries which could cause death should be investigated in all cases of automobile accidents, it was stated in the *Archives of Surgery*, published by the American Medical Association. The automobile, it added, is one of the leading sources of civilian injury, with multiple injuries commonplace.

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Number 1

Consequences of the Widespread Use of Antibiotics

LOWELL A. RANTZ, M.D., San Francisco

PHYSICIANS, to a greater extent than any persons, know of the impact of antimicrobial therapy on the practice of medicine and the natural history of infectious disease. Even they are not fully aware of the enormous quantities of these agents that are used in the United States each year. Penicillin is now being manufactured at a rate of well over 300 tons per annum—equivalent to 150 million courses of 3 million units each year. More than 100 tons of streptomycin are made, which would permit the administration of 100 million 1-gram doses of this agent.⁸ The broad spectrum drugs are also produced in enormous quantities. It is believed that the rate is not less than 250 tons per annum. This is enough to permit the administration of 25 million 10-gram courses each year. Information is not readily obtained as to the production of the other less widely used antimicrobial agents, but it is substantial. Exact figures are not available but it may be readily calculated that more than half a billion dollars a year is spent by patients for these drugs. It is apparent, from these data, that few Americans can escape treatment with antibiotics for any length of time.

It is proper to inquire into the effects of this extraordinarily widespread use of biologically highly active chemical substances. The most important and readily demonstrable outcome has been the selective elimination of the antibiotic-sensitive forms of many

• Great quantities of antibiotics are used each year. A direct result has been the appearance of large numbers of infections caused by organisms that are resistant to the action of one or more of these drugs. A new syndrome, that of superinfection by bacteria resistant to an antibiotic being administered, has become common. Its recognition is of great importance.

The control of resistant infections requires the development of new antimicrobial agents and new knowledge about the use of older ones in combination.

The medical profession must be circumspect in its use of these important drugs or the time may come when the control of many serious infections may become impossible.

common pathogens and the emergence of resistant variants as causes of human disease. In 1943, 90 per cent of all strains of staphylococcus aureus were inhibited by a few tenths of a unit of penicillin per cubic centimeter. This situation still prevails in those parts of the world where few antibiotics are used.³ At present, 50 to 90 per cent of all strains isolated in the clinical bacteriological laboratory are intensely resistant to the action of this antibiotic.² Evidence obtained by culture of the respiratory tract of non-hospitalized patients suggests that the "wild" staphylococci among the population at large are much less frequently penicillin-resistant than are those harbored in the noses and throats of hospital personnel.⁷ As a direct result of this fact, staphylococcus infec-

From the Department of Medicine, Stanford University School of Medicine, San Francisco.

Presented before the Section on General Medicine at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

tions acquired by patients in hospitals, or by physicians and nurses, are quite universally penicillin-resistant.

Equally disturbing has been the development of intensely tetracycline-resistant staphylococci during the relatively brief period that oxytetracycline and chlortetracycline have been in clinical use.⁶ Erythromycin was substituted for penicillin in the routine treatment of patients in a middlewestern hospital. Within five months 70 per cent of all staphylococci isolated from the upper respiratory tracts of workers in that institution were resistant to the action of that drug although all had been sensitive when the experiment began.⁵ There can be no doubt that many infections were caused by these resistant organisms. It is evident that staphylococci are highly adaptable microorganisms and it will be fortunate indeed if antimicrobial therapy remains effective for any great length of time in treatment of infections caused by them. Spink recently reported¹⁰ mortality rates in staphylococcus sepsis comparable to those that were observed before any form of antimicrobial therapy was available.

Very similar changes have been seen in the large family of Gram-negative bacilli, particularly among the coliform-aerobacter group. Some years ago a very high percentage of these organisms were sensitive to the action of streptomycin and tetracycline. Table 1 indicates the results obtained in a survey during 1950-1953 in the author's laboratory. It will be observed that various Gram-negative bacilli are irregularly inhibited by the various available agents. It may be calculated from this information that an effective antibiotic will be selected correctly only 50 per cent of the time on the basis of chance alone when Gram-negative bacilli otherwise unidentified are the cause of the disease. This emphasizes the importance of precise *in vitro* study of this group of organisms by satisfactory methods for determining the ability of antibiotics to inhibit the growth of the bacteria.

A second extremely important development, directly the result of the widespread use of antibiotics, has been the increasingly frequent occurrence of infection by organisms which were virtually unknown a few years ago as causes of disease. The present clinical importance of the various pigmented Gram-negative bacilli, of which the *Pseudomonas* group is the most important, is outstanding.^{1, 9} These organisms, generally intensely resistant to most of or all the available agents, are now common causes of urinary and respiratory tract infection, particularly in antibiotic treated patients. Bacteremia, meningitis and empyema are also now commonplace.

A third interesting and, at times, extremely serious

TABLE 1.—Sensitivity of Gram-negative bacilli to antibiotics

Organisms	Per Cent Sensitive		
	Streptomycin	Oxytetracycline	Chloramphenicol
<i>E. coli</i>	65.3	76.5	76.0
<i>Paracolon</i>	43.9	51.2	58.6
<i>Preteus</i>	64.6	6.2	16.7
<i>Pseudomonas</i>	19.7	14.5	6.6

outgrowth of antimicrobial therapy has been the clinical problem known as superinfection. This term simply denotes the appearance of an infectious process caused by an organism different from that which was responsible for the initial infection for which the patient was brought under antimicrobial therapy. Such superinfections may occur in the same area as the original process or in a different one. The former is seen most frequently in relationship to the urinary tract and to the lung. The latter may occur in the bowel where staphylococcus and other forms of bacterial enteritis are common, in the lung, the meninges, the endocardium and other sites. The pathogenesis of such superinfection is believed to be as follows: The use of antibiotics (particularly those of the broad spectrum group) suppresses the normal flora of the body cavities and eliminates the bacteria that usually cause disease in the various areas of the body, and this paves the way for invasion by resistant organisms. Some kind of competition undoubtedly exists between the normal and the disease-producing bacteria, which probably is one of the protective mechanisms by which the body deals with organisms that reach potentially infectable areas.

Recognition of such superinfection is of the greatest importance. It tends to occur in specific situations, particularly in the presence of obstructive disease of the urinary tract or of structural disease of the lung, and in special kinds of people—notably diabetics, alcoholics, infants, the aged, and the otherwise chronically sick or injured. Clinical recognition of superinfection is not difficult if there is at first striking improvement for a few days after the beginning of antimicrobial therapy, then relapse. In such circumstances superinfection may be assumed to be present. In many instances, however, this important complication occurs without any intervening period of definite alteration for the better in the clinical course. For this reason superinfection must be always suspected in a patient with an infectious disease which does not respond to antimicrobial therapy in the predicted fashion.

The ultimate recognition of superinfection involves the appropriate bacteriological study of blood, urine, sputum and other infected exudates. Unfortunately such techniques are not always available to practicing physicians. If they are not, the diagnosis must be made clinically. In any case in which antibiotics

are given for 72 to 96 hours without definite improvement, superinfection must be strongly suspected. Almost always in such cases, if appropriate bacteriological investigation cannot be carried out it is better to change to another drug, since if superinfection is present it is always resistant to the action of the antibiotic that is already being administered.

The final important effect of the widespread use of antibiotics and the emergence of organisms resistant to their action, has been the stimulation of research on several fronts. On one front are the large commercial drug firms, who have constantly sought new antimicrobial agents which might be useful in the treatment of resistant infection. Outstanding examples are bacitracin and erythromycin, introduced primarily for the treatment of resistant staphylococcal disease, and polymyxin, whose principal role is in the treatment of *Pseudomonas* infection. A second important development has been a keen interest in the potential role of combined antibiotics in the treatment of disease.⁴ Lastly, it has been necessary to reevaluate methods and techniques. The medical profession is rapidly becoming aware that it must discriminate in the use of antibiotic drugs so that these valuable chemicals will not be wasted in the treatment of trivial disease or in needless prophylaxis, lest the time arise when they will not be avail-

able as life-saving agents in patients with serious infections.

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Therapeutic Studies in Hyperthyroidism

Use of Radioactive Iodine

HERMAN STONE, M.D., BORIS CATZ, M.D.,
DONALD PETIT, M.D., and PAUL STARR, M.D., Los Angeles

ON MAY 4, 1942, two papers were read before the American Society for Clinical Investigation reporting experiences with radioactive iodine in treating patients with hyperthyroidism.^{3, 4} Since that day, a flood of papers has reported the results of many groups of investigators with this new therapeutic agent.

The Thyroid Clinic of the University of Southern California School of Medicine at the Los Angeles County General Hospital began using the eight-day half-life isotope, I^{131} , in April 1948. From that time until September 1953, the drug had been given to 394 patients—to 26 of them for the treatment of thyroid cancer.

This, the first report of the group, deals with an analysis of 112 cases of hyperthyroidism observed for from six months to five years.

MATERIAL AND METHODS

The patients were selected from the group of heterogeneous nationality treated in the Los Angeles County Hospital. Sixteen were males; 96 were females. The age range was from 15 to 85 years.

Diagnosis was established by clinical manifestations supported by physical examination, basal metabolism, determinations of protein-bound iodine in the blood, cholesterol content, radioactive iodine uptake and excretion studies, and, when indicated, measurements of the eyes with the Hertel exophthalmometer. The weight and size of the gland was estimated by palpation at the beginning and during the course of treatment.

Thirty of the patients had known they had disease for more than five years. Sixty-nine had diffuse goiter, 33 had nodular goiter, one had substernal goiter, and nine had no clinical enlargement of the gland.

Sixteen had undergone thyroidectomy before treatment with radioactive iodine; 61 had had previous medical treatment with antithyroid drugs; and six had had both.

• Of 112 patients with hyperthyroidism who were treated with radioactive iodine, 110 were relieved of the disease. Nine had transient hypothyroidism. Twelve had permanent hypothyroidism. No other adverse effects that could be attributed to radioactive iodine were noted.

Selected for treatment were patients who (1) were past the age of 40, or (2) had had previous operation with subsequent recurrence of the disease, or (3) were considered poor surgical risks, because of serious heart disease or other disturbances, or (4) for various reasons refused operation.

The average single dose of radioactive iodine was 7 millicuries. Patients were observed for at least eight weeks after therapy before further therapy was considered. If at the end of this time the clinical status had not improved and the protein-bound iodine level in the blood had not dropped, the person was considered for re-treatment. Second and third doses of radioactive iodine varied in amount from half to equal the initial dose, depending on the clinical problem and the results of repeated tracer studies.

RESULTS

One hundred ten patients (98.2 per cent) were relieved of hyperthyroidism. One of the two not relieved did not persevere in treatment and the other died of another disease before hyperthyroidism abated.

Ninety-eight of the group (87.5 per cent) returned to a euthyroid status; nine of these (8 per cent) were transiently hypothyroid. In 12 members of the group (10.7 per cent) there developed what appears at this time to be permanent hypothyroidism. In one patient symptoms characteristic of malignant exophthalmos developed after therapy with radioactive iodine, but it is not felt that this condition is related to the type of therapy used to control hyperthyroidism. No exact figures are available with respect to the occurrence of tenderness in the neck after therapy with I^{131} . Tenderness was noted, but never as more than a transient mild problem.

From the Department of Medicine, University of Southern California School of Medicine, and the Thyroid Clinic of the Los Angeles County General Hospital.

Read at the regional meeting of the American College of Physicians, Riverside, February 13, 1954.

The average total dose was 8.8 millicuries of I^{131} in patients with diffuse enlargement of the thyroid gland; for patients with nodular goiter the average was 11.03 millicuries. The variation of doses between one patient and another, however was so great (see Charts 1 and 2) that data on averages have little value. Ninety patients were treated with only one dose; 12 required two doses; and 10 required three or more doses. Of the 33 patients with multinodular goiter, 11 (or 33 per cent) required second or third treatments. Of the 69 patients with diffuse enlargement of the thyroid gland, 11 (or 16 per cent) required re-treatment. Of 61 patients who received previous treatment with antithyroid drugs, 17 (or 28 per cent) required multiple treatments with radioactive iodine. Of 36 patients who had had no previous therapy, medical or surgical, five (or 14 per cent) required multiple treatments with I^{131} . Four of 16 patients (25 per cent) who had had thyroidectomy in the past for hyperthyroidism, required multiple treatments with I^{131} . The average time of remission including those re-treated was 10 to 12 weeks.

DISCUSSION

The authors believe that all patients with hyperthyroidism will have response to radioactive iodine therapy if adequately treated. While there are isolated reports of other adverse effects, the authors have observed only hypothyroidism; interestingly enough this occurred in the present series, and in the experience of other investigators working with radioactive iodine,⁶ in almost precisely the same percentage as following thyroidectomy.¹ There is obviously no risk of operative death, recurrent laryngeal nerve paralysis or hypoparathyroidism.

Feitelberg and coworkers² reported death from a thyroid storm shortly after administration of I^{131} to a patient with a 200-gm. goiter. There is also a report of temporary hyperparathyroidism⁸ after radioactive iodine therapy.

The problem of dosimetry is a difficult and frustrating one. One may adopt one of several formulae of calculation based on an estimated weight of the gland involved, the radioactive iodine uptake as determined by an immediately preceding tracer study, and the effective half-life of the isotope. Or one may pass, by way of Seed's⁶ lighthearted advice, to the virtual use of a crystal ball. Whatever method of dose determination one seeks to follow, he ultimately comes to agree with Soley and Foreman⁷ that "sound clinical judgment rather than simplified formulations" provides the safest guide; and with Seed that there are "no satisfactory criteria for estimating dosage."

When first they used I^{131} the authors employed

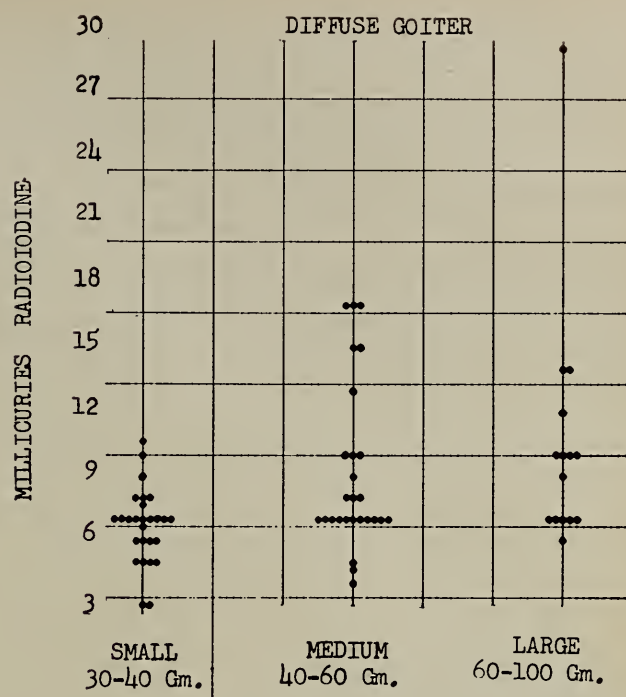


Chart 1.—Dose of I^{131} given for treatment of diffuse thyrotoxic goiters.

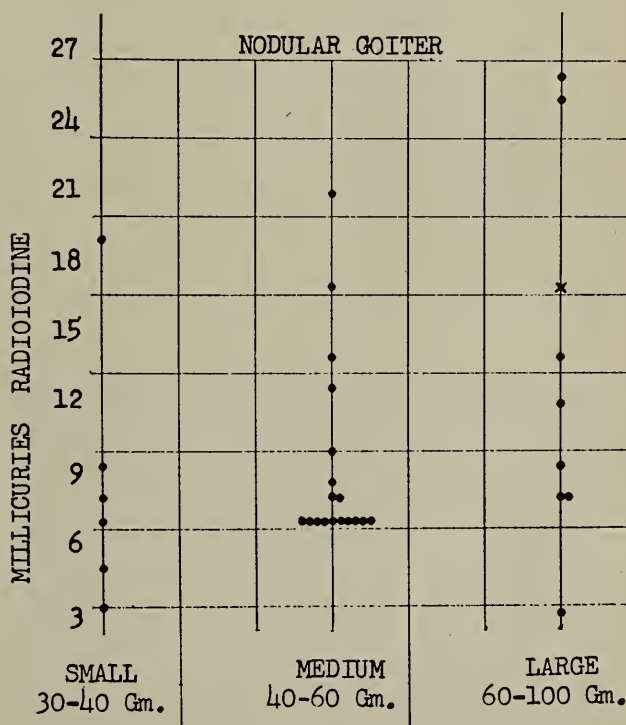


Chart 2.—Dose of I^{131} given for treatment of nodular thyrotoxic goiters.

rough formulation in estimating dosage. Thus, an attempt was made, after palpatory estimation of the size of the gland and after radioactive iodine uptake tests, to deliver 100 to 120 microcuries of I^{131} per gram of the tissue to the thyroid gland. The problems

of such estimates have been well summarized by Kelly.⁵ In the last two years, an arbitrary dose of 7 millicuries has been administered to most patients. It is hoped that in subsequent communications results of these two types of approaches to therapy can be compared.

It is impossible to evaluate the differences noted in the various groups as to the number of treatments required. The average initial dose given to those who only required one treatment was 7.2 millicuries, and to those who subsequently required re-treatment, the average initial dose was 7.1 millicuries. The problems of tissue sensitivity, intensity of mechanisms producing the disease, distribution of the radioactive material in the gland, the rapidity of turnover of iodine in the gland, and the size of the gland must influence the amount of radiation delivered. These factors need more careful analysis than has been available to this time in order that dosage may be expressed confidently in terms of equivalent roentgens rather than millicuries.

The average time of remission (reported in a preceding paragraph) is a difficult factor to appraise. The patients in the present series were re-treated in eight to ten weeks if improvement was not noted. It is possible that if there were a longer period of

observation, not so many patients would be found to need re-treatment.

The authors wish to acknowledge the assistance of Ernest Barnett, M.D., Hilda Rollman, M.D., Frederick Scharles, M.D., Benjamin Simkin, M.D., George Steeples, M.D., and Robert Stirrett, M.D.

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Snorkel Tracheotomy Tube for Respirator Use

CHARLES P. LEBOW, M.D., San Francisco

IN RESPIRATORS of tank type the collar covers the neck of the patient at the proper site for tracheotomy. For patients with tracheotomy it has been necessary, heretofore, to depress the collar by use of various devices to hold it out of the way^{1, 3, 4} or to use a specially designed collar that leaves the tracheotomy site uncovered. Substitution of chest respirators for those of the tank type has been recommended for cases in which tracheotomy is necessary. (High tracheotomy for the purpose of facilitating respirator care is to be condemned.)

Collar depression is not, in the author's opinion, an adequate solution to the problem, for mechanical difficulties are encountered in removing and replacing inner tubes and in changing tracheotomy tubes.

The Snorkel tracheotomy tube (Figures 1 and 2) is a standard Jackson tracheotomy tube in which a cylindrical metal adapter has been attached to the inner tube escutcheon for the purpose of connecting the inner tube to a standard endotracheal tube. Two types have been developed. In the original type, the adapter is permanently attached to the inner tube. In the modified type, the adapter is removable, permitting the tracheotomy tube to be used either as a standard or as a Snorkel adapter. The modified type offers the further advantage that a special T-tube may be threaded onto the inner tube in place of the Snorkel tube. The adapters, adapter rings, and T-tubes are made of silver-plated brass. Snorkel tubes have been made in sizes 0 to 6 and fit Portex-Magill tubes sizes 3 to 7. Table 1 shows the adapter dimensions and the endotracheal tube sizes corresponding to the tracheotomy tube numbers.

The patient wearing a Snorkel tube is so placed in the respirator that the sponge rubber collar is cephalad to the tracheotomy tube. The proper endotracheal tube is passed through a stab opening in the collar at the 12 o'clock position (Figure 3) and is connected to the Snorkel adapter. The respirator is then closed. Nursing procedure for the care of the opening in the throat may be performed through the respirator ports or by opening the respirator as indicated.

The use of the Snorkel device permits tracheotomy in the proper location without concern as to the

• The Snorkel tracheotomy tube, a simple modification of the standard tube, overcomes many of the mechanical inconveniences usually encountered in the care of patients with tracheotomy who have to be kept in respirators. With it in place, it is not necessary to use special devices to hold the collar of the respirator away from the site of the tracheal incision. Nursing care of the patient is made easier.

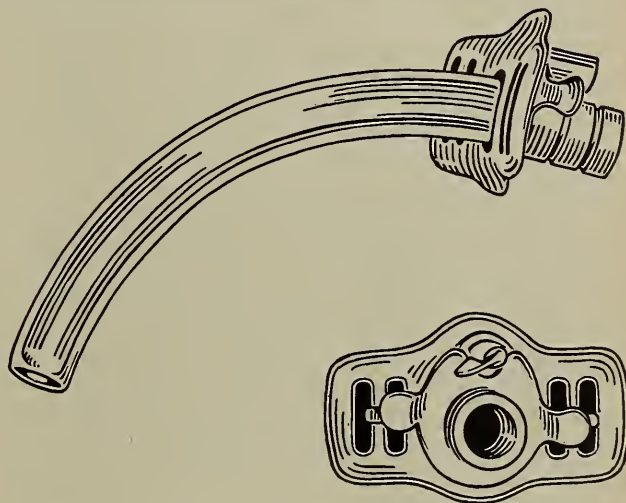


Figure 1.—Snorkel tracheotomy tube, side and anterior views.



Figure 2.—Snorkel tracheotomy tubes, in sizes No. 5 and No. 0. Anterior view.

future position of the respirator collar. When in place, the device eliminates the usual difficulties encountered in handling tracheotomy tubes, particu-

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Presented before the Section on Eye, Ear, Nose and Throat at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.



Figure 3.—Snorkel tracheotomy tube in use as viewed from outside respirator.

larly in children and in short-necked adults. It also removes one cause of reluctance on the part of many special nurses to follow postoperative orders. The pain and trauma to the patient caused by forceful manipulation, which often is necessary when handling the tracheotomy tube in the usual arrangement, is obviated when the Snorkel is used. As an additional advantage, since the respirator collar can fit well when the Snorkel is used, leakage is diminished and the respirator operates more efficiently. The cost of providing a hospital with a proper assortment of Snorkel tracheotomy tubes is nominal.

Two possibilities of disadvantage need be considered. At first there was some concern about the dead space existing within the tube. This was measured and found to be 3.5 cc. for the No. 3 Portex tube, 9.0 cc. for the No. 6 Portex tube, and 13.0 cc. for the No. 7 Portex tube. These volumes are negligible even in patients with diminished vital capacity. The second possible disadvantage is the relative inaccessibility of the tracheotomy tube. However, in the author's experience the efficiency of the Snorkel device in general overcame the problems arising from inaccessibility.

The Snorkel device has proved useful in some patients with tracheotomy not in respirators who require the administration of oxygen. For this purpose a simple T-tube is attached to the adapter so that one end of the horizontal portion of the T is continuous with the adapter. Humidified oxygen is fed into the horizontal portion. This arrangement

TABLE 1.—Snorkel tracheotomy tube specifications

Tube Size	Adapter O.D.	Adapter Length	Portex-Magill Tube No.
0	6 mm.	13 mm.	3
1	6 mm.	13 mm.	3
2	6 mm.	13 mm.	3
3	8 mm.	13 mm.	6
4	8 mm.	13 mm.	6
5	9.5 mm.	13 mm.	7
6	9.5 mm.	13 mm.	7

is in effect a two-way system and permits direct suctioning of the inner tube without interruption of oxygen flow. In addition, the patient may be given artificial respiration merely by intermittent occlusion of the free end of the T-tube with a finger while the oxygen is being administered.

Since the standard endotracheal tubes fit the Snorkel tracheotomy device, the administration of general anesthesia to patients with tracheotomy is greatly facilitated.

In laryngectomy and in certain extensive neck sections which are combined with tracheotomy, the Snorkel tube has been used successfully to permit proper application of pressure dressings without interference with the airway.

The Snorkel tracheotomy tube has been in use on the Communicable Diseases Service of Children's Hospital in San Francisco for the past year, during which time it has proved to be quite satisfactory, not only to the author, but to other attending otolaryngologists.

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Antibiotic Anaphylaxis

JASON E. FARBER, M.D., JOSEPH ROSS, M.D., and
GEORGE STEPHENS, M.D., Oakland

THE CONTINUED USE OF PENICILLIN and other antibiotics has sensitized large numbers of the population to these drugs. An unfortunate by-product of this circumstance is the occurrence of an increasing number of serious and even fatal anaphylactic reactions following administration of antibiotic agents.

Since Waldbott's²⁰ publication in 1949 of a case in which death followed the injection of penicillin, there has been a growing list of similar reports. Kern¹⁵ collected reports of 18 such cases. Fatalities were recently reported by Altouryan,¹ Higgins and Rothchild,¹³ Thomson,¹⁹ Mayer¹⁷ and Bell.² Welch and co-workers²¹ reported a total of 88 anaphylactoid reactions with 25 deaths collected from a sampling survey of 95 hospitals across the country.

An editorial in the *Journal of Allergy* in 1952 directed attention not only to the importance of unreported fatalities but also to the large number of alarming, near-fatal reactions. Reports of severe cases are included in almost all reports of fatalities.

CASE REPORTS

The following two cases observed by the authors are rather typical of these shock-like reactions.

CASE 1. A 36-year-old housewife was given an intramuscular injection of combined penicillin and streptomycin. These drugs had been administered in the past without difficulty. Less than a minute following the injection the patient said she felt ill and had parasthesias of the face and extremities, substernal pain and nausea. The skin became cold and clammy, the radial pulse was rapid and faint, and respirations were wheezy and labored. Cyanosis developed and the eyelids, lips, face and tongue all became quite swollen. The patient arose from a chair, staggered forward and collapsed unconscious, face down on a bed. Epinephrine was given intramuscularly and benadryl intravenously and the patient regained consciousness. She then vigorously vomited more than a liter of a watery material. Complete recovery took approximately two hours.

Comment: Prompt administration of epinephrine and benadryl was probably lifesaving.

CASE 2. A 66-year-old man who had previously received parenteral antibiotics without any reaction

• *Anaphylactic reactions following the injection of penicillin or other antibiotics have increased greatly during the past several years. These untoward reactions to penicillin were infrequent during the first nine years of penicillin therapy and there can be no doubt that hypersensitivity to these drugs is developing in many people. Therefore promiscuous use of them is to be condemned. It is safer not to use antibiotics parenterally in patients with allergic conditions such as bronchial asthma. The further use of a particular antibiotic should be avoided if the patient has previously shown any hypersensitivity to that drug.*

A questionnaire was answered by more than 1,000 California physicians who reported that over 300 patients had severe anaphylactic reactions from parenteral penicillin and streptomycin. There were seven deaths.

Since the antibiotics should still be used when needed, prevention of anaphylaxis is of fundamental importance. The frequency of these reactions can be greatly reduced by the use of antihistaminic solutions combined with the antibiotics. Treatment of these shock-like reactions demands the prompt administration of epinephrine intramuscularly, antihistaminic solutions intravenously and oxygen.

was given an intramuscular injection of combined penicillin and streptomycin. Almost at once he began to sneeze and perspire freely. He complained of substernal pain. He looked pale and very ill. Respirations became noisy and the pulse was rapid and feeble. The patient became cyanotic, lost consciousness and breathed stertorously. He had tonic and clonic contractions of the entire body and became incontinent. Benadryl and epinephrine were given parenterally and oxygen by mask. The patient regained consciousness within five minutes and was then hospitalized. An electrocardiogram taken while the patient was unconscious showed depression of ST segments across the precordium, as much as 4 mm. in some leads. An electrocardiogram taken several hours later showed only slight depression, 1 mm. or less, of the ST segments in leads V4 to V6.

Comment: The electrocardiographic findings suggesting anoxia or coronary insufficiency are of interest.

Presented before the Section on General Medicine at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

TABLE 1.—Anaphylactic reactions to antibiotics as reported by more than 1,000 physicians answering questionnaire

Antibiotic	Anaphylactic Reactions		
	Moderate	Severe	Deaths*
Penicillin	520	323	7
Streptomycin	49	10	0
Combinations (penicillin and streptomycin)	0	5	0
Other antibiotics	33	4	0

*Deaths occurred in Berkeley, Centerville, Hayward, Richmond, Sacramento, San Leandro and San Francisco.

To gather data on the incidence of shock-like reaction to antibiotics a brief questionnaire was sent to physicians, chiefly in central California, and more than a thousand replied. The results of the survey are shown in Table 1.

Data on two fatal cases reported in reply to questionnaires follow:

CASE 3. The patient, a 65-year-old pensioner with pulmonary emphysema, congestive heart failure and a purulent bronchitis, had received procaine penicillin G several times in the previous four years, the last injection about nine months previously. Then, when given an intragluteal injection of procaine penicillin G, within approximately 20 seconds the patient collapsed to the floor, had labored noisy respirations, became deeply cyanotic, stopped breathing and was dead in less than a minute after the injection.

Comment: The rapidity of this episode suggests the urgency of starting treatment at once and indicates the necessity of having available emergency medication.

CASE 4. A 60-year-old railroad worker who had received multiple injections of penicillin during the past several years, the most recent approximately six months previously, was given 600,000 units of procaine penicillin G in the arm. Immediately he complained of vertigo and less than a minute later he collapsed to the floor, unconscious. Respirations were shallow and irregular and the pulse was rapid and extremely weak. The blood pressure could not be obtained. The patient died in less than three minutes after the injection. At autopsy, pronounced emphysema and congestion of the lungs with focal areas of atelectasis were noted. The other organs were singularly free of abnormal findings. There was no evidence of pulmonary embolism.

Comment: The paucity of morphologic findings at necropsy is characteristic of anaphylactic death. Death is the result of abnormal physiologic reactions without obvious tissue damage.

Data were obtained on two other fatal cases of the survey. In one a 70-year-old man was given an intramuscular injection of 600,000 units of benzathine penicillin G for bronchopneumonia. Death was sudden. At autopsy pronounced congestion and edema of the lungs and bronchi was observed. The other case, in which autopsy was carried out also, is to be published separately.

DISCUSSION

Since almost 30 tons of penicillin is certified for distribution each month, the astronomical number of injections of the drug is readily apparent. By comparison, the number of anaphylactic reactions which occurs seems small indeed. Nevertheless, a careful and objective appraisal of the problem does not permit a relaxed or comfortable attitude. Kern's¹⁵ analysis, for example, clearly shows that the fatalities following the injection of penicillin have practically all occurred in recent years. This suggests a long, silent period of sensitization to the antibiotics and that now we reap the wild wind of anaphylaxis.

Autopsy findings in two cases have been described by Curphey.⁵ The patients, both asthmatic, had diffuse congestion of the lungs and bronchi. There were dilated, engorged vessels in the bronchial mucosa and considerable mucoid exudate in the trachea and larger bronchi. On microscopic examination, acute congestion of the capillary septa with patchy and irregular dilatation of the alveoli were noted. The bronchioles showed interstitial edema with eosinophils, polynuclears and round cells in the submucosal layer. The remainder of the organs showed pronounced vascular engorgement and interstitial edema. The question arises whether some of these findings were not caused by the bronchial asthma per se. The speed at which a fatal termination occurs suggests not only "physiologic death" but obviously would not permit morphologic tissue changes of any extent except perhaps that caused by edema.

In addition to the fatalities there are a large number of near-fatal and severe anaphylactic reactions. (More than 300 such instances were reported in this survey.) Each of these events is a trying experience for both patient and physician.

All reports in the literature suggest a much higher incidence of these reactions in persons known to have allergic disease such as hay fever or asthma. In addition, the incidence of reactions is definitely greater in persons who previously had any manifestation of sensitivity to the drug, such as urticaria.

According to both the literature and the survey here reported upon, penicillin is the antibiotic that causes anaphylactoid reactions most often—probably owing to the fact that penicillin has been used the longest and in the greatest quantity. Severe shock-like reactions to streptomycin also occur,⁸ but very few such reactions to the tetracyclines are reported. These drugs, of course, have been given by mouth for the most part.

Various forms of penicillin have caused anaphylactoid reactions: crystalline penicillin G, procaine penicillin G, benzathine penicillin G, penethamate and others. It is of interest that these preparations are chemically different compounds. It is believed

after injection they unite with the serum proteins and form antigens¹⁶ giving rise to specific antibodies. Then after immunological conditions are thus created, another injection of the antigen produces an antigen-antibody reaction, setting loose in the blood stream histamine or histamine-like substances which precipitate the alarming shock-like syndrome.⁶ Both experimentally and in humans, antihistaminic agents¹⁰ have been shown to counteract these histamine substances and are therefore indicated in the treatment of the condition.

In the production of anaphylaxis, substances other than histamine may also be responsible.⁴ Campbell and Nicoll³ showed, for example, that a cholinergic substance, possibly a peptone, or a muscle-stimulating compound similar to snake venom or lecithins may share etiologically with the histamines. Undoubtedly, there are multiple anaphylatoxins involved in these explosive reactions. The pathogenetic mechanism is still shrouded in biochemical and immunologic mystery.

PREVENTION OF REACTIONS

An awareness of the danger of anaphylaxis is imperative. Obviously, penicillin and related antibiotics should be used only when there is a definite need or indication for the drug. They should not be given to persons who previously had any of the various allergic manifestations to the drug.^{11, 18} Unless really necessary they should not be used in persons who had or have had fever, bronchial asthma or allergic conditions. The tetracyclines may be more safely prescribed for those patients. A positive and immediate reaction to skin test with the antibiotic controverts its use; a negative reaction does not rule out the possibility of anaphylaxis. Intravenous injection of penicillin should by all means be avoided.

During the years 1944 to 1951, before the authors used antihistaminic solutions prophylactically, seven severe anaphylactoid reactions were observed in a series of more than 1,000 injections of penicillin, streptomycin or dihydrostreptomycin alone or in combination. Since that time, antihistaminic solutions have been combined with the antibiotics as routine procedure and no severe anaphylactoid reactions have been noted in more than 3,000 injections.

Regarding the antihistaminic solutions, the authors have added one of the following preparations to the diluent before injection: aqueous benadryl (10-20 mg.), pyribenzamine solution (10-20 mg.), histadyl solution (20-40 mg.), or chlortrimeton (4 mg.). Each of these preparations has been equally effective in preventing these shock-like reactions.

There is considerable literature concerning the rationale for the prevention of anaphylactic shock by means of the antihistaminic drugs. Feinberg¹⁰

said: "Numerous reports have appeared which indicate that those antihistamines which effectively antagonize the bronchoconstrictive action of histamine are capable of diminishing the severity of anaphylaxis in the guinea-pig." The antianaphylactic activity of benadryl, pyribenzamine, chlortrimeton, histadyl and other antihistamines have been clearly demonstrated in the laboratory animal.¹⁰

Glazko and Dill¹² reported a high concentration of benadryl in the lungs and spleen of animals to which the drug was given to study its distribution in body tissues. This is of interest since these organs play a vital role in anaphylactic shock. It may be that these antihistamines accumulate at "receptor sites" in competition with histamine.¹²

Corticotropin (ACTH) has been shown to greatly diminish or inhibit anaphylactic shock in guinea pigs if administered one hour before injection of the antigen.¹⁴ Fatal anaphylaxis cannot be prevented by giving corticotropin at the time of the shock reaction. Theoretically, intravenous injection of hydrocortisone should be helpful but this preparation has not been investigated in this connection.

TREATMENT OF THE ACUTE ANAPHYLACTIC REACTION

If the patient can be tided over the first several minutes of the reaction, the chances of survival are good. Hence, immediate, vigorous treatment is imperative. Epinephrine 1:1,000 intramuscularly and antihistaminic solutions intravenously should be administered at once and repeated as necessary. Intravenous injection of aminophyllin has also been recommended. These drugs should be available whenever penicillin is being injected. Oxygen should also be given as soon as possible and preferably under positive pressure to combat pulmonary edema. It is important to prevent obstruction of the airways.

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Treatment of the Inadequate Endometrium in Infertility

EDWARD T. TYLER, M.D., Los Angeles

MANY PHYSICIANS are on occasion called upon to treat an infertile patient who has had most of the so-called "routine" therapeutic procedures with no success. Often she has gone from one doctor to another and no specific causative factor has been found and nothing conclusive observed to explain the sterility. There is still so much obscure in the infertility problem that many patients fall into the category of "cause unknown."

Cases in which results of most of the usual tests such as carbon dioxide insufflation, postcoital examinations and semen analyses are normal cause considerable concern because, among other things, they raise the problem of finding a new approach for a patient who has often had thorough and highly competent care. In such instances it is sometimes a temptation to advise the patient to give up active treatment in the hope that the situation will resolve itself, or to conclude that the trouble is probably emotional.² However, while it appears well established that a neurohypothalamic pituitary-ovarian relationship exists, emotional disturbances cannot be indiscriminately blamed simply because no definite cause has been found. Even though psychological factors are undoubtedly present to some degree in most infertile patients, this consideration is perhaps being overemphasized in the over-all sterility problem.

In recent years some of these normal "problem cases" have been subjected to various types of intensive study by many investigators and occasionally encouraging findings have been reported. The present communication is to outline briefly one approach to the obscure problem of sterility. To help focus a little more attention on the particular condition involved, the somewhat paradoxical term "conceptionless fertilization" is employed to indicate a situation wherein fertilization occurs but the fertilized egg is unable to implant itself in the endometrium, and menstruation occurs on schedule.

Although this is by no means a new concept in sterility, it is one that is often overlooked. Of 24 articles on the management of sterility taken at random

• In many cases of sterility in women, the usual routine investigation does not reveal abnormality sufficient to be considered the cause of the condition. In such cases thorough study of the endometrium is indicated, for in some it will be noted that there is not a consistently good secretory development and conditions are not conducive to nidation.

Intensive hormonal therapy with chorionic gonadotropin, estrogens and corpus luteum preparations may prove helpful where endometrial defects are found, both in sterility and, preconceptionally, in habitual abortion.

only five gave specific attention to this phase of the problem. A few investigators such as Hughes^{5, 6} have reported pertinent physiological and pathological observations in considerable detail over the last few years, directing particular attention to the endometrium. Rock⁷ has already recently pointed out the significance of endometrial dysfunction, stating that this problem "is an important factor in many cases of infertility." Brown,¹ in England, similarly reported (on the basis of therapy of 111 patients followed by pregnancy in 38 cases) that "in many cases of infertility in which there is no gross pathological condition, treatment to improve the poorly prepared endometrium has proved successful."

As a preliminary to discussing specific therapy in this report, it may be well to review briefly some of the basic physiologic factors.

Implantation of the fertilized egg in the endometrium depends on adequate transport of the fertilized egg through the fallopian tube and into the endometrium, together with the initiation of trophoblast enzymatic activity at a time when the endometrium has been adequately prepared. Preparation of the endometrium depends on pituitary stimulation to the ovary and the production of two specific hormones—estrogenic, which causes proliferation, and corpus luteum which brings about secretory changes and provides fertile ground for implantation of the egg. The corpus luteum hormone is produced after ovulation, for the most part, although there is some evidence that luteinization can occur in unruptured graafian follicles. Lack of normal secretion

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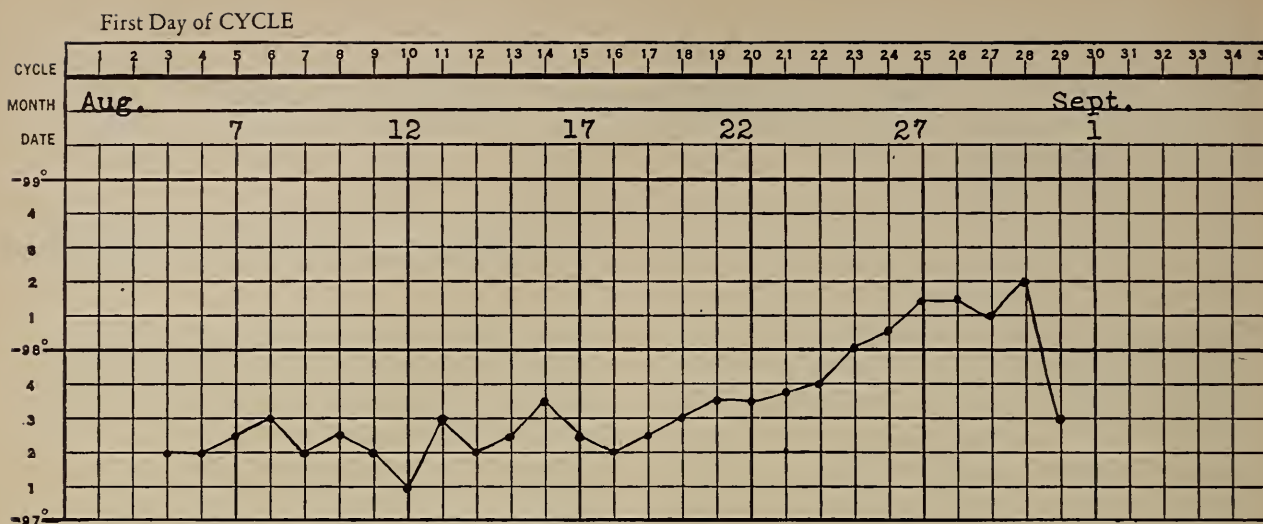


Chart 1.—Basal temperature chart illustrating short luteal phase.

of either or both ovarian hormones may cause inadequate endometrial development in a given cycle. This can result in a "poor secretory" endometrium late in the cycle or it may cause so much delay in endometrial development that the fertilized egg, entering the uterine cavity before the endometrium is adequately prepared, cannot imbed itself.

Since the state of the endometrium is highly important, careful direct study of it as well as interpretation of indirect data is indicated. The measures most commonly employed to evaluate endometrial function are: biopsy, basal temperature studies and pregnandiol assays. Endometrial biopsy should be used not solely for determining the occurrence of ovulation; it should be interpreted by a pathologist who is qualified to note the variations in histological structure, glycogen deposition, enzyme content and other factors that may distinguish a good from a poor secretory endometrium. In Hughes' series of 176 sterile patients, 77 or 43 per cent were found, upon biopsy, to have defective endometrium.⁵ One drawback to biopsy as an index of adequate endometrial development is that the histologic structure may vary from one part of the uterine cavity to another and a specimen from one area is not necessarily representative of the entire endometrial pattern. This can be offset in some part by obtaining specimens from various portions of the uterus. Moreover, if upon repeated endometrial biopsy the secretory pattern is consistently observed to be poor, the probabilities are that the deficiency is a significant factor in infertility.

Basal body temperature curves also provide a useful index of corpus luteum function. In normal women the body temperature rises relatively abruptly in the second half of the menstrual cycle, possibly averaging 0.6° F. to 1.0° F. higher than during the first half. The elevation is supposedly caused by in-

creased progesterone secretion or to an increase in one of the breakdown products of progesterone metabolism.³ That the temperature elevation may not be attributable to progesterone itself is indicated by the fact that certain other compounds may cause significant rise in temperature over the basal level. For example, the author has noted that oral administration of a compound, 19 nor-ethinyl testosterone, causes a far more pronounced elevation than does parenteral progesterone in equivalent doses.

In some patients basal temperature charts will repeatedly show gradual rather than abrupt increase in the second half, and often in such cases the maximal elevation is only 0.4 or 0.5° F. A basal temperature pattern of that kind is believed by some investigators to be suggestive of inadequate corpus luteum function. The author's own data correlating these charts with pregnandiol excretion would tend to support this view. Other basal temperature curves show the second half of the cycle (as indicated by temperature elevation) to be considerably abbreviated. This short second half may also be considered to be a manifestation of poor corpus luteum function (see Chart 1).

Determination of urinary pregnandiol excretion is another method of evaluating corpus luteum activity. Pregnanliol is an excretion product of progesterone metabolism. Assays usually are made on 24-hour urine specimens.

For several years the author has been keeping data on pregnandiol determinations for purposes of comparison, in particular with basal temperature curves. Indications are that pregnandiol values are fairly well related to the other indices of endometrial function. There are many exceptions, but often one finds a general correlation of lower pregnandiol levels with the previously mentioned atypical basal body temperature curves. Patients with temperature

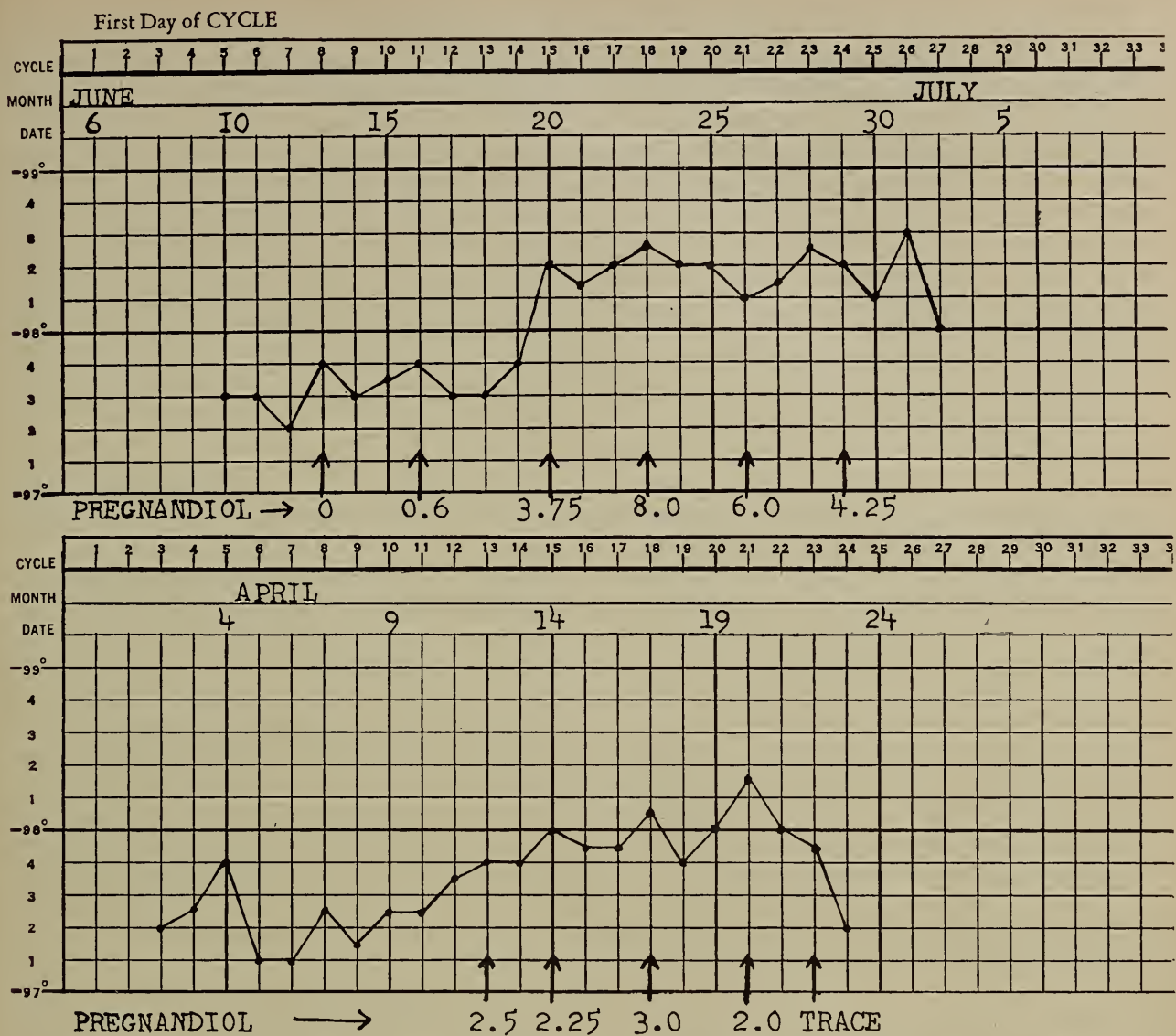


Chart 2.—Comparative values of pregnandiol noted in a normal and an "abnormal" basal temperature chart.

curves of that kind may have pregnandiol excretion of no more than 4.0 mg. in 24 hours, whereas patients with good endometrial function (as indicated by other data) not uncommonly have pregnandiol excretion of 8.0 mg. to 10.0 mg. in 24 hours. A comparative study of menstrual cycles in different patients is given in Chart 2 to illustrate the range of values that may be found in each instance.

The author has administered progesterone to amenorrheic women and has carried out pregnandiol excretion determinations in those cases in order to see how close the correlation might be. When given 250 mg. of progesterone orally in 24 hours, these women excreted between 35 and 50 mg. of pregnandiol in 24 hours. This implied excretion of approximately 15 to 20 per cent. When dosage was lowered, the proportion of excretion stayed the same, indicating close correlation. Parenthetically, it is of interest that while progesterone appears to be well absorbed when given by mouth, the physiological

effect is not consistent. This may be related to steroid inactivation in the liver.⁴

Any combination of the foregoing methods of evaluating endometrial quality may point to the endometrium as a specific problem. It should also be noted that even if hormones are present in normal amounts the endometrium may be refractive and not respond to normal hormonal stimulation.

In cases in which inadequacy of the endometrium is a factor, hormones should be given in large enough dosage to have physiologic effect. Although the cost is relatively high, lesser dosage is entirely wasted. Besides estrogens and corpus luteum hormone, chorionic gonadotropin should be given for ovarian stimulation. Giving only the former two hormones might inhibit corpus luteum development. Administration of the three hormones should be started as soon as body temperature determinations indicate ovulation probably has occurred. Various dosage combinations may be used. One schedule

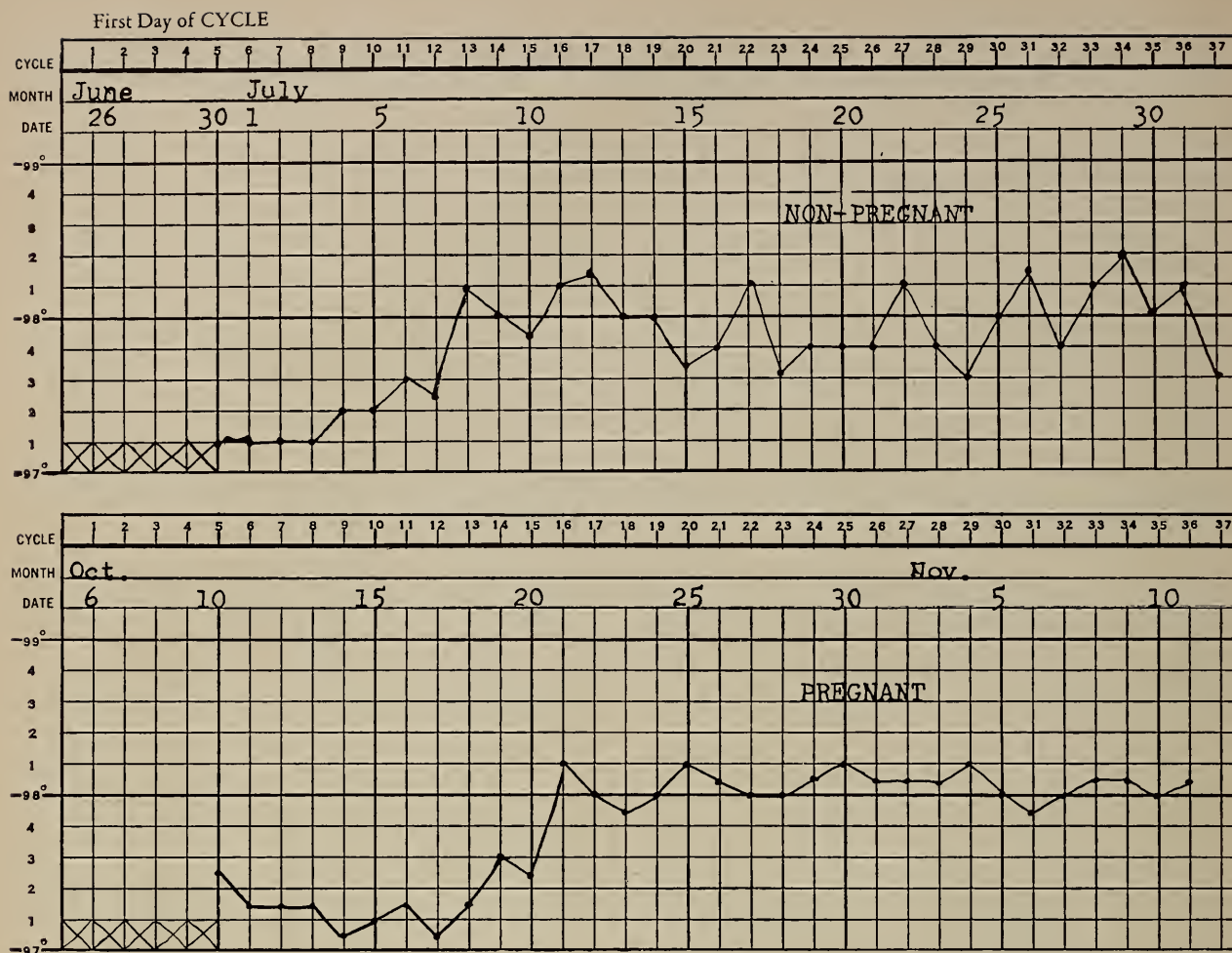


Chart 3.—Irregularly elevated basal body temperature chart observed in patient whose menstrual period is delayed by intensive medication, as compared with consistent elevation generally seen in pregnant patient.

used by the author is to give 1,000 international units of chorionic gonadotropin, 1 mg. of estradiol trimethylacetate and 10 mg. of progesterone intramuscularly on alternate days; and in addition either 75 mg. of anhydroxyprogesterone and 2 mg. estradiol trimethylacetate by mouth daily or one 1 mg. buccal tablet of estradiol benzoate and 10 mg. of progesterone three times daily. Hormonal therapy should not be started until it is fairly likely from the temperature chart that ovulation has occurred. If begun earlier, ovulation may be inhibited or the basal body temperature elevation brought about by the medication might cause uncertainty as to when ovulation occurs. On theoretical grounds, however, therapy should be started promptly upon the occurrence of ovulation in order to get adequate endometrial development for implantation of the ovum some five to seven days later. Once therapy is initiated it should be continued until about the sixteenth week after ovulation.

The therapy described may cause a delay of a few days in the onset of menstruation if pregnancy does not occur. In some instances there is a greater delay

but usually it can be distinguished from the interruption caused by pregnancy in that the basal temperature is inconsistently elevated whereas in pregnancy the elevation is sustained (Chart 3). With high dosage of any of these hormones, of course, it is possible to produce prolonged delays in the onset of menses, including strong changes of decidual type.

In a series of patients with "functional" sterility who were treated by the author there were 39 cases in which all the major factors could be considered relatively normal and evidence pointed to inadequacy of the endometrium as the specific problem. Twelve of the patients (30.7 per cent) in this group became pregnant during intensive treatment as described. A number of other patients conceived while therapy of this kind was being carried out, but as additional factors were present, conception could not be attributed to endometrial improvement alone. Most of the 12 patients whose pregnancy was ascribed to endometrial therapy were persons with sterility problems of fairly long standing who previously had had many other kinds of therapy.

It may also be noted that inadequacy of the endo-

metrium can also be a factor in certain instances of habitual abortion. Statistics concerning effectiveness of therapy in abortion are difficult to evaluate and the author does not intend to imply that endocrine therapy of the type described will prevent habitual abortion. However, it is the opinion of several investigators that preconceptional therapy with heavy doses of estrogens and progesterone, as well as chorionic gonadotropin, may in some instances, salvage pregnancy. Hughes said: "Failure of the endometrium to produce adequate amounts of carbohydrate appears to be a cause of sterility and particularly of habitual abortion. The determination of the secretory activity of the endometrium serves as an important index in determining the cause of sterility and abortion. Lack of preparation of the endometrium is primarily due to failure of the pituitary to produce adequate amounts of luteinizing hormone for corpus luteum stimulation."

The author has observed cases in which, after as many as six previous abortions, pregnancy was continued to term following preconceptional therapy. The specific purpose of the treatment in these cases

prior to conception is obviously to insure good nidation. It is probable that if endocrine therapy is of value at all in abortion, the value is prophylactic rather than therapeutic. It cannot be considered particularly effective in threatened abortion, for there the pathologic condition is already established and unalterable changes often exist.

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Measles Encephalitis

A Successful Method of Treatment with Typhoid Vaccine

EVELYNNE G. KNOUF, M.D., and ALBERT G. BOWER, M.D., Los Angeles

IN THE 12 YEARS ended June 30, 1952, measles encephalitis was diagnosed in 215 patients, 171 of them under 12 years of age, at the Los Angeles County General Hospital. Fifty of them with apparently severe damage to the central nervous system were treated with typhoid vaccine—in almost all cases after there seemed little likelihood of spontaneous return to normal. The corrected death rate in the group not treated with typhoid vaccine was 2.7 per cent, and in the treated group there were no deaths. All except one of the treated patients were clinically normal after treatment.

Although bronchopneumonia is the most common complication of measles, encephalitis is the most dreaded. This complication is usually recognized by change in the sensorium of the patient, characterized by varying degrees of lethargy or coma, or by agitation, as seen in those who are hyperirritable, irrational, maniacal or psychotic. Deviation from the normal personality is present in all cases. To the cerebral signs may be added meningeal irritation as manifest by stiffness of the neck or back. Some degree of myelitis with weakness and paralysis is common. Occasionally bulbar involvement as evidenced by cranial nerve paralysis may be noted.

Of the 215 patients with measles encephalitis in the present study 16 per cent had pneumonia in addition to encephalitis. Also, 40 per cent had a generalized convulsion at the onset or early in the course of the encephalitis and 76.4 per cent had body temperatures of 101 degrees F. or more at the time of the complication. Only 6.9 per cent had a hemorrhagic rash. Fifty-three per cent had meningeal signs, 9 per cent bulbar involvement, 3.4 per cent cord bladder, 6.9 per cent weakness and paralysis of one or more extremities and 8.9 per cent athetoid or choreiform tremors. Reflexes were normal in 58.6 per cent of the cases. Headache was a prominent complaint in only 5.5 per cent of these patients.

As to the mental status, 46.5 per cent were lethargic, sleepy or drowsy; 35.5 per cent were deeply comatose; 16.6 per cent were conscious but irrational, incoherent, agitated and hallucinatory. Interestingly, 1.4 per cent had a clear sensorium and had meningeal signs *only*.

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• During a 12-year period 50 patients with measles encephalitis were treated with typhoid vaccine—45 of them not until they were in a vegetative state. There were no deaths in the treated cases. All except one were clinically normal after treatment was ended. Late in the series it became apparent that after the clinical normal is attained and the electroencephalogram becomes normal, treatment should still be continued until the cortex has been "challenged" repeatedly and the electroencephalogram shown to remain normal.

The "shock" element in the treatment with typhoid vaccine was prevented by anticipating and circumventing the unfavorable reactions to the vaccine.

It may take 20 to 50 treatments or more with typhoid vaccine to return a patient to normality. Each individual is different and responds in a different period of time.

Encephalitis occurred most frequently within one to five days after the appearance of the rash; however, it may occur as long as 21 days after rash develops.

Leukocytes in specimens of peripheral blood varied from fewer than 5,000 to more than 50,000 per cu. mm., with polymorphonuclears predominating. Spinal fluid cell counts also varied widely, from fewer than 10 to more than 1,000 per cu. mm., with lymphocytes predominating. In 45 per cent of the cases the range was from 10 to 100 cells, while in almost 40 per cent it was from 400 to 1,200 per cu. mm.

Of the 50 patients treated with typhoid vaccine, 45 were deeply comatose at the beginning of therapy. The other five had become responsive and were returning slowly to normal, but, because of grossly abnormal electroencephalograms, it was decided to treat them. All except two of the 50 patients were afebrile at the start of therapy.

A competent neurologist examined all the treated patients, for they were the ones expected to remain abnormal, to have undesirable neurological residual effect, or have to be cared for in institutions. Eight of them were paralyzed in two or more extremities.

All returned to normal. Four required short term physiotherapy.

Following is a report of a case in which there was severe involvement of the central nervous system.

REPORT OF A CASE

A six-year-old girl had daily fever of 102 degrees to 107 degrees F. for a period of three weeks before starting therapy. At onset of treatment the child was like a wax doll that breathed; she had been fed entirely by stomach tube. All extremities were spastic with exaggerated contractures. She had convulsions repeatedly and on 16 different occasions manual resuscitation and intracardiac injection of epinephrine was required. Apparently the continuous high fever was owing to encephalitis because no intercurrent infection was found upon repeated examination. It was felt that nothing could be accomplished with typhoid vaccine but because of the insistence of the mother and for lack of anything better, treatment was given intravenously with 50 million typhoid organisms for the initial dose and a total of 15,000 million organisms in five days. Within one month after the last dose, the patient talked intelligently and obeyed commands, and within six weeks she was discharged with recommendation for physical therapy for tight muscles. She was observed for two years and during that time she grew and developed physically as she normally would have. She had no convulsions and although she did have temper tantrums, she kept up with her school work.

The patient in the foregoing case was insufficiently treated by present standards. However, the results were indirectly responsible for much of the authors' present thinking about typhoid treatment of encephalitis. The child had had daily convulsions for the three weeks preceding therapy, yet after the first treatment the seizures ceased and did not occur again in the two years of observation following the illness. Although the vaccine produced no higher fever than the disease itself, after the first dose of vaccine the temperature dropped to normal for the first time in weeks. Hyperpyrexia could not be the sole factor in the use of typhoid vaccine, for if it were the patient's fever before treatment should have brought about cure.

From the results the authors concluded that no matter how badly involved the central nervous system might be, even to the point where it seems that every brain cell must be involved, it cannot be assumed that complete or even partial destruction has occurred until therapy with typhoid vaccine has been tried.

The youngest patient treated was one year old, the oldest 56. Both recovered from encephalitis and both had normal electroencephalograms when discharged. Electroencephalograms were made of 44 of the 50 patients, and 38 had normal tracings at the

completion of therapy. Six had abnormal tracings at the time of discharge, although clinically they were well. Five of the six were lost to further observation, but one was reexamined a year later and the electroencephalographic tracing indicated slight diffuse abnormality.

In 15 cases in the treated group, follow-up observation could not be carried out. Of the remaining 35 patients, five were observed from time to time for five years, six for three years, ten for two years and 15 for one year. All except one were leading a normal existence when last observed, going to school or working. Exaggerated emotional instability had been reported in four cases; petit mal seizures, controlled with Dilantin,[®] in one.

Criteria for Treatment

During the 12 years of this study the authors did not hasten to begin vaccine therapy in any case. Time was allowed for spontaneous return to normal without vaccine therapy, and in 152 of the 215 cases of encephalitis this did occur concomitantly with decline of the temperature to normal after the febrile stage of the disease, with complete recovery within the five days following. In every instance a minimum of five days of normal temperature was permitted to pass before treatment with typhoid vaccine was considered. Then, if the patient was abnormal, preparations were made for treatment, provided the family gave a written request for therapy. It was explained to the parents or relatives that nothing could be promised with regard to treatment and that therapy could be stopped at any point.

Treatment was never commenced in the presence of pneumonia or any other serious complication except encephalitis; after the secondary complication cleared, typhoid vaccine therapy was begun.

Owing to the rather strict criteria for starting treatment 45 of the 50 who did receive treatment were completely "vegetative" by the time it was begun.

Criteria for Cure

Patients with measles encephalitis are not considered cured upon return to clinical normality, but only after the electroencephalogram tracing also is normal and remains normal during a test treatment during which the cortex is challenged.[†] In addition the patient, if cured, should be able to return to his normal environment and carry on his accustomed duties without difficulty. In other words he should be able to carry on a normal existence unhampered by tremors, convulsions, abnormal behavior or changed personality. That these objectives can be

[†]After a normal electroencephalogram is obtained, a typhoid vaccine treatment is given for test purposes. If the patient is cured, the electroencephalogram remains normal during and after treatment; if not cured, it reverts to abnormal during therapy.

obtained and retained by patients with encephalitis who otherwise would die or be institutionalized was demonstrated repeatedly in the present series, as well as in encephalitis cases of different origin, and not reported.

Vaccines Used

During the first eleven and one-half years of the period here reported upon, commercial vaccine was used. Although typhoid vaccine alone was given whenever available, the combination typhoid and paratyphoid triple vaccine was used in at least 50 per cent of the cases. The number of typhoid organisms in the various vaccines varied from 500 million to 2,000 million per milliliter. However, as the dose was estimated on the basis of total organisms it mattered little whether the vaccine had 500 or 2,000 million per milliliter. Orders were never written for milliliters or fractions of a milliliter of vaccine, but rather for the exact number of hundred million organisms (typhoid alone, or a total of typhoid and paratyphoid organisms, as the case might be.)

During the last six months of this study only freshly prepared typhoid vaccine containing no preservative was used, the organisms numbering from 6,500 to 15,000 million per milliliter. Since large doses of commercial vaccine were used in treating patients with severe disease (as much as 50 to 150 milliliter per treatment) it was felt that the preservative used in the vaccine constituted a potential menace to the safety of the patient. As no freshly prepared vaccine without preservative is available on the market, the bacteriologist at the hospital provided one.*

During the 12 years covered in this series, five patients with encephalitis, one of whom had measles encephalitis, were treated with typhoid bacteriophage instead of vaccine. A febrile response almost identical to that of the typhoid vaccine was obtained. None of the patients showed any effective response clinically. The one with measles encephalitis was able to walk and feed himself but, because of severe grand mal seizures and failure to return to anything resembling clinical normality, he finally was placed in an institution.

Administration of the Vaccine

During the first five years of the series, the predetermined dose of typhoid vaccine was given directly in the vein, undiluted, and a violent, bed-

shaking chill occurred within 5 to 20 minutes thereafter, fever going to 105 degrees or 107 degrees F. Usually within the 6 to 12 hours following, the temperature became normal or subnormal. Giving vaccine in this manner proved to be so harrowing to patient, nurse and physician that the estimated dose of vaccine was diluted in 300 to 500 milliliters of 5 per cent dextrose and water and the mixture was infused at a rate of approximately 100 milliliters per hour. With this method the chill was less severe and often absent, the temperature reached a peak more slowly and returned to normal within 24 hours.

In the last five months of the 12-year period, typhoid vaccine was given intramuscularly. Larger doses had to be used to produce a similar febrile reaction, and more treatments had to be given to attain maximum benefit. However, patients did respond when the vaccine was given intramuscularly, with the advantage that treatment could be continued after venipuncture became difficult or impossible.

Expected Reactions with

Typhoid Vaccine Treatment

In at least 50 per cent of cases a chill lasting from 20 to 60 minutes occurred within 30 minutes to two hours after treatment was begun. The peak of temperature, which varied from 101 degrees to 107 degrees F. rectally, was reached in two to five hours when vaccine was given intravenously and in four to six hours when given intramuscularly. The temperature usually returned to normal within 18 to 24 hours after the beginning of therapy. In a small number of cases a secondary rise of temperature to 101 degrees F. or more occurred on the day following therapy.

Clearing of the sensorium usually occurred after five or six treatments although often there was evidence of improvement after the second or third. Some patients passed from a comatose state to overactivity and mania. If convulsions occurred during the disease, they ceased with treatment. Memory returned late.

Trophic ulcerations ceased to develop and old lesions healed rapidly after four or five treatments. Sometimes this occurred several treatments ahead of the clearing of the sensorium.

Before therapy, the number of leukocytes in the blood was within the normal range (7,000 to 9,000 per cu. mm). At the peak of reaction, relative leukopenia occurred, the number of cells varying between 3,000 and 5,000 but with a disproportionately high number of neutrophils (70 to 80 per cent). Four to six hours after completion of therapy, the number of leukocytes varied from 20,000 to 80,000 with neutrophils exceeding 90 per cent; but 24 hours

*The vaccine is made as follows: Recently isolated typhoid bacilli are used. Eighteen-hour broth cultures are inoculated onto tryptose agar in Kolle flasks. After 18 to 24 hours' incubation at 37 degrees C. the organisms are washed off with sterile physiological saline solution and killed by 56 degrees C. in 2 hours. The organisms are washed once with saline solution, resuspended in saline and the number of organisms per milliliter determined turbidometrically, using a photoelectric colorimeter. The vaccine is checked for sterility and then sealed in vials of 5 or 10 milliliter. Sterility tests are made at least every two weeks as long as the vaccine is being used. Adequate refrigeration is maintained at all times.

after the vaccine was administered, the leukocyte content was usually back to normal. (If not, or if the number is above 20,000 per cu. mm., it is better to postpone treatment at least another 24 hours.)

Widal's test, carried out at intervals, showed a gradual rise in titer. In some cases in the present series titers in excess of 1:12,000 were observed.

TREATMENT OF THE PATIENT

Requirements for Treatment

For treatment with typhoid vaccine the patient must be hospitalized, preferably under the supervision of one or more physicians. One physician should be responsible for writing all orders and for making each decision as to the amount and mixing of the vaccine to be given.

Nurses must be in constant attendance during each 24 hours of therapy. There is distinct advantage in having the same nurses each time, for the entire procedure is smoother and the physician has much better control of the situation.

Preparation of the Patient

All patients who received typhoid vaccine treatment were poor medical risks because of both physical and mental deterioration. Determinations of the blood carbon dioxide combining power and of the non-protein nitrogen, potassium and chloride contents were made and if abnormal were corrected. The hemoglobin content was determined repeatedly, and if the value fell to 60 per cent, transfusions were given. The urine was examined frequently. Five per cent dextrose solution was given intravenously by continuous drip for at least 24 hours immediately preceding therapy. Temperature, pulse and respirations were determined every four hours before treatment. If convulsions occurred before therapy or if the patient was wild, noisy, or extremely disturbed, chloral hydrate or sodium Luminal was given.

During the last year of the period under discussion, the cholesterol content was determined routinely along with the other chemical studies of the blood. Of a total of 35 patients with encephalitis, all with abnormal electroencephalograms, only six had cholesterol content as low as 200 mg. per 100 cc. In 17 cases it was between 250 and 300 mg. and in 12 it was more than 300 mg. Sixteen of the 35 in this group were treated for a period of two months with Proloid (thyroid globulin) and all had pronounced change for the better in actions and attitude. The changes were noted in patients who had made spectacular recovery, clinically and by electroencephalogram, after treatment with typhoid vaccine. Bone age studies in children show these patients to be hypothyroid.

The Dose of Typhoid Vaccine

When commercial vaccine is given intravenously, the initial dose is 50 million organisms for children and 100 million for adults. With this, as well as succeeding doses, if the maximum temperature does not exceed 102 degrees F. in two hours after it is given, twice the amount already given may be administered again the same day. On each succeeding day (unless freshly prepared vaccine is used) the amount of vaccine given is twice that of the previous dose if the peak temperature exceeds 103 degrees F. rectally, and three times that if less than 103 degrees F. In spite of the fact that the patient may reveal no fatigue or untoward effect, it is wise to permit rest periods of three or four days after each three to five days of continuous treatment. If the patient is desperately ill, it is best to treat only on alternate days.

The doses of freshly prepared vaccine needed are much smaller than those required when ordinary commercial vaccine is given, and the rule of doubling or tripling each succeeding dose does not hold. When fresh vaccine is given intravenously, the initial dose may be 100 million organisms for either children or adults. It is given in 300 to 500 milliliters of 5 per cent dextrose in water. If the patient has a chill and the peak temperature reaches 103 degrees F., the second dose should be the same, and the third identical with the first and second if the same degree of fever is attained. Succeeding doses should be increased very slowly and cautiously, by adding no more than 150 to 200 million organisms at a time.

When given intramuscularly, the vaccine should be injected deep into the muscles of the hip or thigh and in a different area each time. Doses must be increased by 200 to 500 million organisms each time when the intramuscular method is used. This is a smaller increase, approximately 25 per cent, than when commercial vaccine is used. The fresh vaccine may be given undiluted without producing local reaction. In fewer than one per cent of the cases in which it was used in this manner did redness, swelling or tenderness develop. (Because at least five times as much of the commercial vaccine is needed to give comparable hyperthermic response, its use intramuscularly frequently produced local reactions by virtue of volume alone.)

If intravenous and intramuscular methods were combined in the same patient, the dose was calculated separately for each method. For example, a patient receiving 500 million organisms intravenously one day followed by a temperature of 105 degrees F., was on the following three days given intramuscular doses of 2,000 million, 4,000 million and 6,000 million with temperature peaks of 102

degrees to 103 degrees F.; on the fifth day another intravenous dose, this time of 500 or 650 million organisms, may be given and cause a peak temperature of 105 degrees or 106 degrees F. Thus there can be no interchange of intramuscular or intravenous doses.

Sample Orders Written for Treatment

Orders should be written in such a fashion that nothing is left to the judgment of the nurses. They must be all-inclusive and anticipate every possible complication to treatment. A sample list is as follows:

1. Typhoid vaccine (here state the dose in numbers of organisms) in 300 or 500 milliliters of 5 per cent dextrose and water to which has been added 2,000 mg. of ascorbic acid and 100 mg. of nicotinic acid. If it is to be given intravenously, state the rate (20 to 60 drops per minute). Or the stated dose of vaccine is given intramuscularly (thigh or hip).

2. Determine rectal temperature, pulse and respiration every 15 minutes until temperature reaches normal, and then every two hours. Determine blood pressure every hour in patients over 14 years of age.

3. Give acetylsalicylic acid, lase with warm alcohol and fan or give tepid sponge baths as needed, or every two hours for temperature of 104 degrees F. or over.

4. Dramamine 50 mg. every three hours as needed for nausea or vomiting.

5. Oxygen as needed.

6. Eschatin® (2 ml. for children or 4 ml. for adults) every two hours for six doses and then every two hours for pulse of 130 or over in children and 120 or over in adults.

7. Epinephrine (2 minims for patients under 2 years of age, 3 minims under 4 years, 4 minims between 4 and 14 years, and 5 minims over 14) every 15 minutes for four doses, then every two hours as needed for pulse of 130 or over in children

between 1 and 14 years and for pulse of 120 or over in patients over 14 until the pulse rate comes down.

8. Watch for and relieve immediately any abdominal distention by rectal tube and prostigmine (1:2,000 solution), .025 ml. every 15 minutes for two hours. If the distention is not relieved partially in 30 minutes, gastric suction should be carried out.

Typhoid vaccine therapy has fallen into disrepute because of the dangerous and sometimes lethal shock reaction that frequently follows intravenous injection of even small doses. Such reaction must be anticipated by recognizable signs and prevented by reliable therapeutic measures.

Death may be circumvented by early recognition of the signs of impending collapse before the patient enters shock. Tachycardia, especially in the very young, with or without cyanosis or pallor, is one of the earliest signs. Epinephrine, administered in series as outlined, eliminates tachycardia and brings about immediate improvement, but will be ineffective if abdominal distention is unrelieved. Eschatin is used as an additional prophylactic measure.

Challenging the Cortex

During the first six years of the period covered by this report treatment sometimes was stopped too early. Since the authors had nothing but clinical improvement as a guide to treatment, it was necessary to rely on the judgment of parents and relatives as to when the patient was normal.

From experience in treatment in the last two years of the period it was learned that clinical normality is not enough, and treatment now is continued until the electroencephalogram becomes normal. When that occurs, the cortex is challenged by more therapy, and an electroencephalogram is taken during the height of treatment to see if the pattern remains normal or again shows abnormality under such conditions. Also, if the electroencephalogram becomes normal but the patient remains clinically abnormal, treatment is continued, regardless of the electroencephalogram.

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Lumbar Sympathectomy in Older Patients

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NO CRITERIA for lumbar sympathectomy in arterial insufficiency due to arteriosclerosis obliterans have been found fully satisfactory. The operation has been accepted as a useful procedure, however,^{1, 3, 5} and is generally considered suitable for younger patients. However, there are a great number of patients past 65 years of age, and usually physiologically older, who are in need of help but have been denied this operation on the basis of age alone. To aid in development of criteria for selection of older patients for sympathectomy, a study was made of 43 patients 65 to 83 years of age on whom sympathectomy, bilateral in 17 cases, was performed. The operations were done in a period of five years, and the present study is based on observations made within six months to five and a half years after operation.

SELECTION OF PATIENTS

None of the patients in the group had thromboangiitis obliterans or traumatic arterial insufficiency. All gave a history of progressing arterial insufficiency, which was a positive requisite for operation. As a means of determining beforehand the probabilities of benefit from operation, sympathetic block was carried out in all cases and the response was judged on the basis of pneumoplethysmographic change, rise in temperature of the extremity, increase in tolerance for walking, and subjective response. None of the patients had the so-called paradoxical response to sympathetic block. Spinal anesthesia and peripheral nerve block were used in only a few cases.

POSTOPERATIVE COMPLICATIONS

In 29, or 67 per cent, of the patients operated upon, postsympathectomy neuritis developed, usually on the sixth to the tenth postoperative day. It was always worse at night, was annoying but not unbearable, and lasted from two weeks to eight months. Reassurance as to its nature and administration of acetylsalicylic acid compound are all that is offered at present in such cases; earlier, a patient given codeine became addicted to it. In addition to the foot care prescribed for other patients, daily applications of lanolin ointment are used to keep the skin soft. Surgeons in some large centers say they have not observed postsympathectomy neuritis; it is pos-

• *Of 43 older patients (aged 65 to 83 years) with arteriosclerosis obliterans treated by lumbar sympathectomy for one or both limbs, 19 had excellent result, 13 had fair result and four had poor result. One died postoperatively and six later. Results were better than prognosticated from response to sympathetic block. Thirty-four patients considered the operation worth while and twelve, after unilateral sympathectomy, requested operation for the other limb also. Twenty-four after operation could walk farther without claudication.*

sible that this complication does not become evident until after the patients have left the centers.

Other complications were atelectasis, mild adynamic ileus, urinary retention, incisional hematoma, and headache, none of these being severe or leading to prolonged illness. They responded to ordinary measures. In no case did gangrene progress after operation.

Thrombophlebitis occurred in two cases, causing only mild edema which nevertheless was something of a problem since elevation and elastic bandaging of the involved extremity were contraindicated, yet circulation was hindered and vulnerability to infection was increased. Anticoagulant therapy and horizontal bedrest proved effective. In one of these patients, minimal and asymptomatic edema developed after he became ambulatory. Elastic bandages were tried but caused pain; they were discontinued, therefore, and after three years there have been no symptoms although minimal edema still recurs at the end of the day. The other patient also had moderate edema with aching pain. These symptoms were relieved with elastic bandages and recurred when the bandages were removed. Therefore the patient continued to wear bandages. The experience with thrombophlebitis in these cases has led to the subcutaneous administration of 50 mg. of heparin every six hours in all cases where anticoagulants are not contraindicated. Since this measure was adopted there has been no thrombophlebitis—nor any hemorrhage—in the last 18 cases.

One patient, aged 74, died in hospital on the fourth postoperative day. Death was sudden and was attributed to coronary artery thrombosis, which was

TABLE 1.—Results of sympathectomy as compared with preoperative prognosis as determined by response to sympathetic block. Forty-three patients more than 65 years of age.

Preoperative Prognosis	Temperature Rise in Toe on Sympathetic Block	Total Cases	Results*			
			Good	Fair	Poor	Died†
Good.....	9-14° F.	12	9	3	0	0
Fair.....	5- 8° F.	19	8	7	1	3
Poor.....	0- 4° F.	12	2	3	3	4
		43	19	13	4	7

*Six months to five and a half years after operation.
†Only one of the deaths was in the postoperative period.

observed at autopsy. This patient, who had had thrombosis of the terminal aorta and impending gangrene of the right foot, was operated on before the postoperative use of heparin became routine. Preoperative electrocardiographic findings were within normal limits.

Popoff⁶ reported precipitation of gangrene, an unusual complication, not experienced in this series, which he attributed to the opening of the arteriovenous shunts with further diminution of circulation through the nutrient capillaries.

RESULTS

All patients have been examined from time to time, by one or another of three physicians familiar with vascular disease, since the operations (six months to five and a half years at the time of this presentation). According to the clinical records, the resident surgeon considered 40 of the 43 patients improved on discharge; in most instances this opinion was corroborated by the chief of service and by the patient's declaration. At last report, 30 were still free of symptoms of arterial insufficiency, except for intermittent claudication, which had been present in 35 before operation. Twenty-four said that they could walk farther before onset of claudication than they could preoperatively, and in none did claudication occur in a shorter distance than preoperatively. Nine of the 24 who had improvement in this respect could walk at least 400 yards farther than before.

Of 17 patients who had had bilateral sympathectomy, presumably including the first lumbar ganglion, 15 observed no change in sexual activity, although most had not been sexually active for years. One was unable to ejaculate (relaxation of sphincter action probably caused intravesical discharge of the ejaculate). Only one reported increase of libido and of ability to maintain erection.

One 70-year-old patient had early gangrene of the right forefoot; after sympathectomy a transmetatarsal amputation was performed and the stump did not heal. Ten days later an elective amputation at the calf was done and the stump healed readily. The patient is one of the few with amputation for vascular disease who successfully wears a prosthesis.

One patient, a Demerol addict for two years before operation, had no noticeable improvement, either

objective or subjective, when discharged two weeks after right lumbar sympathectomy. Symptoms were severe coldness and pain on rest. The patient was cured of addiction, but because of persistent pain the sympathectomized limb was amputated above the condyle.

In the opinion of 34 patients, the operation was well worth while. Two said it was "no good" and that they would not submit to it again, one because of severe postoperative neuritis and one because no improvement was apparent.

Comparison of preoperative prognosis and postoperative results is shown in Table 1. Result was classified as *good* when pain was absent and activity unrestricted; *fair* when pain was absent but activity was restricted yet sufficient to let the patient care for his ordinary needs; *poor* when pain was present and the patient needed help in caring for himself. It should be added that of 19 patients with good result, 13 were able to work after the operation.

Prognosis was based primarily on rise of temperature on sympathetic block; and as Table 1 indicates, results were better than predicted in most cases. In nine patients with high vasomotor tone, as manifested by cool, moist feet, both prognosis and results were good. Good results were also correlated with preoperative arteriographic observation of short segmental obstruction of the superficial femoral or popliteal artery with moderately good collateral circulation.

COMMENT

Admittedly, lack of controls limits the value of this report; yet the author knows of no series of sympathectomies for which there were matching cases, conservatively treated, that could be observed for comparison. Such a series would be valuable. Clinical impressions are of some value when sufficiently contrasting; in the author's experience the many patients treated conservatively in the same period did not have significant improvement in ability to walk without claudication. In a moderate number amputation was required owing to pain or gangrene, and in general symptoms seemed more severe.

Twelve patients with unilateral sympathectomy of the more seriously affected limb were, in a manner, their own controls. These patients, six months to

four years after operation, requested sympathectomy for the other limb since they had had an arrest of progression or relief of symptoms following the first operation. Another point of evidence, in still other cases, was that after operation there was arrest or improvement of arterial insufficiency which had grown progressively worse under conservative management.

It has been advocated that sympathectomy should always be bilateral. However, the high incidence of annoying neuritis and the possibility of complications in older patients seems to make a definite indication desirable. In 60 per cent of the cases here presented, one limb was much less affected; in such patients operation on the alternate side can be done later if warranted.

Since good results sometimes occur even when not prognosticated by preoperative tests (Table 1) and since the operative mortality is only 1.6 per cent, it would seem that most patients' with progressive arteriosclerosis obliterans should be offered sympathectomy.

Although there is no evidence that smoking is an etiologic factor in arteriosclerosis obliterans, it

should perhaps be noted that every patient in the series had smoked heavily for at least 20 years and in most cases for 35 to 40 years.

In most cases resection included the first, second and third lumbar ganglions; in 12 cases it was extended to the fourth. No difference was noted in these 12.

Veterans Administration Hospital.

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Medical Technicians

The Present Need and Training in California

RAMONA GREEFKENS and JAMES HOPPER, JR., M.D., San Francisco

THE SHORTAGE of medical laboratory technicians is still critical, although the present survey of clinical laboratories in California shows that the scarcity has slightly lessened within the past few years.

Five years ago a survey was made to determine the need for laboratory technicians throughout the state.¹ It showed a 14.5 per cent deficit of technicians at that time. Because of the continued shortage of properly trained technicians, and the interest displayed by the medical profession in the last survey, it was felt that a second survey should be made. It was also thought that it would be of value to consider the future outlook by surveying the apprenticeships available for student technicians. Accordingly, another survey was conducted in an effort to reveal the reason for, and the extent of, the shortage of technicians.

On April 30, 1953, questionnaires were sent to 700 laboratory directors in California. Of the 432 answers received, 176 were from directors of hospital laboratories, 198 from directors of private clinical laboratories, and 58 from doctors having laboratories in their offices. Following are the questions and a summary of the answers:

1. Q: What is the number of licensed technicians or technologists in your laboratory?

A: 1,486 technicians were employed in the 432 laboratories.

2. Q: What is the number of current vacancies in your laboratory?

A: 210 vacancies in the 432 laboratories (a shortage of 12.4 per cent).

3. Q: What is your average yearly turnover of technicians?

A: Approximately one-third of the total number of technicians employed.

4. Q: Are licensed technicians easily obtained?

No	Yes	No Answer
A: 343 (79%)	63 (15%)	26 (6%)

5. Q: What is the quality of available technicians?

A: Number of Laboratories	Answer
46	Excellent
164	Good
149	Fair
24	Poor
5	No technicians available
7	Variable
37	No answer

¹From the Department of Medicine, University of California School of Medicine, San Francisco.

Supervisor of Field Service of Curriculum in Medical Technology (Greefkens) and Medical Supervisor of Curriculum in Medical Technology (Hopper).

6. a) Q: What is the number of apprentices or trainees in your laboratory?

A: 313 trainees in the 432 laboratories.

- b) Q: What was the previous education of trainees?

A: Number of Trainees	Years of College
49	0
14	1
67	2
27	3
156	4 or more

Major in College:		College Degree:	
Science	Non-Science	Yes	No
172 (55%)	141 (45%)	154 (49%)	159 (51%)

- c) Q: Do trainees receive maintenance in any form?

A: Salary	Meals and Room	No Maintenance
258 (82%)	10 (3%)	45 (15%)

The survey revealed a 12.4 per cent shortage of technicians in the 432 laboratories. It also showed a ratio of one student to five technicians, and a yearly turnover of approximately one-third of all technicians employed. Thus, there are not enough students to replace the yearly loss of technicians. Since the majority of technicians are women of marriageable age, the turnover is understandable; the small number of students is not. Medical technology has become a more recognized field, as evidenced by the increasing number of colleges which offer this subject as a major course of study. The program generally includes three years of college work, with emphasis on chemistry and biology, and a fourth year of hospital apprenticeship. This training leads to a degree of bachelor of science in medical technology. The University of California School of Medicine, recognizing the need for such a program, has changed the requirements for admission to the Curriculum in Medical Technology in order to include students enrolled in these four-year courses (see Appendix I). Of the 313 apprentices in the laboratories covered by the survey, 7 per cent were completing requirements for a degree on this type of program.

One of the main reasons for the shortage of technicians is the scarcity of available apprenticeships (only 37 per cent of the laboratories offered apprenticeships). Students who have obtained degrees in subjects other than medical technology must spend a year of apprenticeship training in order to qualify for state licensure (see Appendix II) and national registration (see Appendix III). Not only are they

hindered by a scarcity of available apprenticeships, but economic conditions at the present time may prevent most of them from spending a fifth year in training without maintenance in any form.

According to our survey, however, the status of student technicians has improved within the past few years. Of the 313 students who obtained apprenticeships, 82 per cent received a salary, 3 per cent received meals and room; approximately 15 per cent received no compensation. Although no question was asked concerning the amount of the salaries paid to the students, some of the laboratory directors supplied this information. The salaries paid to students ranged from \$50 to \$256 a month, with an average of approximately \$175 a month.

An additional reason for the shortage of technicians is the high qualifications which laboratory directors demand of technicians today. Once satisfied with technicians who had a minimum of scientific education and experience, they now seek personnel with college background who have had training in all phases of laboratory work. This change is shown not only in the survey, where the average laboratory director rated the quality of the majority of technicians as only fair to good, but also in the comments of the directors concerning the type of technicians available today. One of the most common criticisms offered by the directors concerned the large number of poorly qualified, unlicensed technicians working in doctors' offices. The observations of the laboratory directors are verified to some extent by the survey which reveals that of the 313 students, 55 per cent were science majors, 12 per cent had some college science, and 33 per cent had taken no science courses whatever; furthermore, only 49 per cent had a college degree. The situation seems to present a paradox: While maintenance of high educational standards is desirable in principle, in practice it apparently has aggravated the shortage of technicians. Moreover, with highly educated and trained personnel go higher salaries and, to cover this, increased fees which lessen the availability of laboratory tests for the average patient. (It should be noted here that statistics* show the price index for medical care in San Francisco had risen from 100.5 in 1948 to 118.4 in 1952, and by September of 1953 to 122.6.)

At the time of the last survey, insufficient remuneration was believed to be one of the reasons for the shortage of technicians. Although this may still be a cause, it does not seem to be so important a factor now as it was. A survey conducted jointly by the Bay Area Salary Committee and the United States Bureau of Labor Statistics showed that the interquartile range† of salaries of clinical laboratory

technicians in 1953 was \$300 to \$335 (weighted average \$317), whereas in 1948 the results of a similar survey showed the interquartile range to be \$200 to \$244 (weighted average \$234). During the same period, statistics* show, in San Francisco the consumer price index for all items rose from 102.3 in 1948 to 116.9 in 1953. Thus, salaries for technicians have risen more than the cost of living in San Francisco. It is notable, however, that Montgomery² reported in a recent article that in private industries newly graduated scientists are offered starting salaries of about \$375 a month. Since employers in fields other than medicine apparently are in a position to offer higher wages than employers in the medical field, science graduates are likely to be lured into non-medical technical positions. In addition, recruitment of these students is carried out on a large competitive scale by commercial companies.

What, then, are the main reasons for the shortage of technicians and what can be done to solve the problem? The following reasons are indicated by the results of both of our surveys:

1. *The small number of students in the field.*

This lack could be partly remedied by promoting interest in the field of medical technology by means of pamphlets distributed to schools, radio spot announcements, and use of advertising cards in the city trolley cars and buses. Some of these suggestions are being carried out by the Committee on Public Relations of the California Association of Medical Laboratory Technicians. This is in addition to the technician recruitment program on a national scale launched this year by the American Society of Clinical Pathologists, the College of American Pathologists and the American Society of Medical Technologists with grants and support from the American Cancer Society and the U. S. Public Health Service (National Cancer Institute). Still it would seem to be a responsibility of county medical societies and similar groups to stimulate recruitment of students into this necessary ancillary branch of medicine.

2. *The expense of four years of college work plus one year of unpaid apprenticeship.*

This problem could be solved by (a) establishing more four-year programs with an apprenticeship included in the fourth year, and (b) by supplying paid apprenticeships to students who have already completed their college work.

3. *The scarcity of available apprenticeships.*

This obviously requires the cooperation of laboratory directors and hospital administrators in offering facilities and planned programs of apprenticeship training to student technicians.

*United States Department of Labor, Bureau of Labor Statistics.

†The range of rates received by the middle 50 per cent of the employees. The weighted average (mean) is obtained by dividing the sum of all rates of all employees by the total number of employees.

I. Requirements for Admission to the Curriculum in Medical Technology, University of California School of Medicine:

Applicants must have either of the following:

1. Bachelor's Degree.

Applicants for admission on this basis must hold a bachelor's degree with a major in one of the biological sciences. Courses taken in preparation for the major must have included Bacteriology 101, Biochemistry 102 or 100A-100B, and Biochemistry 101A-101B, or their equivalent.

2. Three years of college training.

Applicants for admission on this basis must have completed three years of a regulation curriculum in medical or clinical laboratory technique. This curriculum must have included courses in biochemistry and advanced bacteriology. Applicants will not be considered unless the college they attended shall grant a bachelor's degree to them upon satisfactory completion of the four-year curriculum.

II. Prerequisites for Entrance into the Examination for California State Licensure:

1. Completion of a regular four-year college or university curriculum in medical or clinical laboratory technique, with a degree of bachelor of arts or bachelor of science in a college or university approved by the department (State Department of Public Health), the last year of which course shall have been primarily clinical laboratory procedure; provided, however, that if the curriculum did not include practical clinical laboratory work, six months as a clinical laboratory technician trainee or the equivalent, as determined by the department, in a clinical laboratory approved by the department shall be required; or

2. Graduation from a college or university maintaining standards equivalent, as determined by the department, to those institutions accredited by the American Association of Universities with a degree of bachelor of arts or bachelor of science and a major in bacteriology, biochemistry, or essentially equivalent subject or subjects, as may be determined by the department, plus one year as a clinical laboratory technician trainee or the equivalent as determined by the department in a clinical laboratory approved by the department. One year of practical experience in a public health laboratory may be accepted if such experience or if university or college courses included practical work in clinical biochemistry and hematology; or

3. Graduation from high school or the equivalent as determined by the department, with a minimum of five years' experience as a clinical laboratory technician trainee or the equivalent as determined by the department, doing clinical laboratory work em-

bracing the various fields of clinical laboratory activity in a clinical laboratory approved by the department, except that university or college work which includes courses in the fundamental sciences may be substituted for such experience to a maximum of four years in the ratio of 30 semester hours or equivalent quarter hours for each year of experience, and further, except, that time spent in a school approved by the department shall count as acceptable experience on a month-for-month basis.

III. Requirements for Admittance to the Examination of the Registry of Medical Technologists of the American Society of Clinical Pathologists:

Two years (60 semester hours) of college work in any college or university accredited by a recognized standardizing association. During the two years the following courses must be taken: Biology: 12 semester hours, which may include general biology, zoology, bacteriology, parasitology, anatomy, histology, or embryology. Chemistry: One year of inorganic chemistry (6 semester hours) including lectures and laboratory; and 3 semester hours of quantitative analysis, organic chemistry or biochemistry, including lectures and laboratory.

Electives: Sufficient to give a total of 60 semester hours of college credit; *plus*, instruction in medical technology for at least 12 consecutive months in a school of medical technology approved by the Council on Medical Education and Hospitals of the American Medical Association.

IV. Curriculum in Medical Technology—University of California School of Medicine:

The University of California School of Medicine offers a training program to students preparing to be medical laboratory technicians. The curriculum is given as a practical apprenticeship. It consists of one year of full-time work, and covers training in biochemistry, medical bacteriology, clinical pathology, parasitology, mycology, blood bank procedures, serology, histologic technique, basal metabolism, and electrocardiography. The laboratory work is done by the students under the supervision and instruction of the graduate technicians and certain faculty members of the School of Medicine. The students are assigned to a rotating service in the various clinical and teaching laboratories of the University of California Hospital, the School of Medicine, and associated institutions.

Graduates are eligible to take the California state examination and the National Registry examination.

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Psychological Aspects of Atomic Disaster

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THE PSYCHOLOGICAL, emotional and spiritual resources of our country are going to be of critical importance to our very survival should atomic war reach us. The efforts put forward during the late war toward keeping morale high on the home front in order to produce sufficient material for fighting forces will seem as nothing against the tasks to be expected. Any discussion of the psychological aspects of atomic warfare as well as bacteriological and chemical warfare must include the maintenance of an effective level of common purpose and state of mind which maintains a will to resist the enemy. Secondly, such a discussion must concern itself with the expeditious handling of psychiatric casualties as they occur.

Psychiatrists, along with practitioners in other fields of medicine, stand ready to bring the accumulation of psychiatric knowledge to bear upon the peculiar problems of total warfare. Clinical entities come into being which are almost never seen in civilian life. Psychiatry is predominantly a clinical science, and fortunately clinics have not been filled to date with the kind of reactions to be anticipated in the event of a bombing. Consequently the writings of others who have reported experiences such as those to be expected must be turned to. The best organized reports of experience concerning men under this kind of stress came from the armed forces of the United States during World War II. Also available are observations of civil populations in other countries during the late war, as well as data from disasters that have affected our own population.

PANIC

Panic is a sudden, overpowering fright that removes all reason and the ability to take effective action. This terror is frequently brought about by a misinterpretation of dangers, especially when it is accompanied by frantic attempts to secure safety. It can occur in the presence of real or imminent danger, but it also occurs when real danger is very slight. In a person it is a reaction to an unbearable situation to which the person is unable to adjust temporarily. In a group it is usually precipitated by mass suggestion and is highly contagious. Thus, panic involves temporary major disorganization of

• Increasing attention to the psychological aspects of atomic disaster will help improve the ability of the citizens of this country to withstand attack and survive as a free people. Since an enemy may be expected to exploit any internal weaknesses it can find, preparation must be made against the onslaught. The ability to deal effectively with any situation, even the most awesome, depends on knowledge of what to expect, and there is no reason to believe that facts about atomic disaster are an exception to this time proven truth.

The psychological aspects need to be considered from two points of view, namely, the effect on masses of people and on individuals.

thinking, loss of control over fear and loss of purposeful action.

There are many sad examples of the tragedies brought about by panic far out of proportion to the external events that started them—the Iroquois Theater fire in Chicago in 1903 and the Cocoanut Grove disaster in Boston in which apparently possible escape routes were passed up in mad stampede to jammed exits; the trampling to death of many persons in disaster shelters in Europe during World War II; and the most terrible needless loss of 5,000 lives in a Chungking bomb shelter during the Sino-Japanese war.

It has been estimated that if Manhattan Island were to be bombed and a rumor got started that the Battery was the safest place to be, thousands upon thousands could be pushed into the water by the pressure of masses of people trying to reach the spot. When panic seizes groups of people, no effective action is taken by them, and the best that can be hoped for is that there will be no deaths beyond those that occurred in whatever event started the panic. It is easy to visualize that if panic came quickly during atomic attack, numbers of people might unnecessarily expose themselves to flying debris and radiation which could easily have been avoided by waiting for even short periods before leaving shelter.

Of even greater potential danger, perhaps, is the possibility of the outbreak of mob rule and plundering, and lack of attention to care of the wounded. Then there would be the enormous job of reestab-

Read at a meeting of the California Office of Civil Defense concerned with Radiological Problems of Medical Officers in Civil Defense, October 1, 1953.

lishing order so that the affected area might contribute to a war effort. Scapegoating also must be expected as an exploit by the enemy's psychological warfare arm—for example, an attempt to disunify the civil populace by spreading rumors that the wealthy conspired to cut short protection against disaster.

PANIC PREVENTION

Necessity for Preparation

By far the most effective steps to prevent panic are those that can be taken now, not after an attack has come. There are those who maintain that full public information on the possible effects of atomic attack would cause so much fright in the populace as to be dangerous in itself, but that position is untenable in the light of recent history.

For instance, in 1938 Barcelona was bombed for a total of 26 minutes by six airplanes and although damage was slight, a million and a half dwellers in the city whirled in panic for 40 hours. This may seem almost comical now, 15 years and several wars later, but it illustrates that people frightened by the unknown can conjure a disaster far worse than any real circumstances warrant. Terrible as the atom bomb is, and realistic as fears of it may be, it is probable that unless the public were adequately prepared, the terror and fear would exceed the facts in the event of attack. Part of the preparation must be public enlightenment concerning the effects and limitations of atomic warfare. Certainly the people should be well acquainted with the fact that there is an overall medical plan and that supplies will be made available. The knowledge that aid is available reduces the feeling of helplessness that produces panic.

Communications

The establishment of communications as soon as possible following the disaster is recognized as being of psychological as well as of practical importance. There will be some radio facilities and use may be made of sound trucks, or some sound equipped helicopters for the most urgent of information to be directed to certain groups within the area. People will not be willing to take chances unless they know that there is a chance of success and they have some idea of where they stand. To prevent panic, the press and radio broadcasters should be deeply impressed with the fact that this is one time that sensationalism can be ruinous to the local effort, to say nothing of the effect it may have in un-bombed areas which might be anticipating attack. Rumors will most certainly get started, rumors such as that all the water is polluted with radioactive material, or that the enemy has landed nearby. Someone has suggested the setting up of an actual rumor clinic to deal with these and much of the necessity for adequate com-

munications will be to "nail" rumors as quickly as possible.

Need for Authority

When the myth of invulnerability, which so many people harbor, has been rudely shattered by a bomb, people will be looking for protective kindly authority. In all installations, whether medical or other, this should be fully appreciated. Just as the masses are subject to "hysterical" following of mass "fear leaders," so can they be guided into imitating admirable qualities. Where leadership is strong, people are more able to control their fears and imitate the seemingly more fearless.

Need for Group Cohesion

After the initial confusion following explosion there will be a great need for a feeling of being together on the part of the people. Obviously, good leadership as everywhere will be of inestimable value. But no group activity can be as valuable in reducing panic and subjective sensations of fear as constructive action. The work of clearing roads for the passage of vehicles or of joining in bucket brigades and the like is necessary. Whenever a job is assigned, it should be assigned to two or more people, even though one might accomplish it, in order to avoid the helpless feeling of being alone in the midst of devastation. The problem in child care will depend largely on the emotional state of the adults about them. It was found in England during the late war that the incidence of common symptoms of insecurity was greater in children who had been removed from their families in London to safe places than it was in children who remained in an area of danger with their parents. Certainly children should be encouraged to help with the work if they are old enough to do so, and nothing will help them to overcome their anxiety more than feeling useful and doing something to reduce tension. Teachers certainly could help in taking care of large groups of children by organizing games or group singing, or even by carrying on makeshift school work.

Evacuation

Evacuation following detonation of atom bombs will have to be planned in order to prevent panicky clogging of all avenues. Public foreknowledge that there is a plan is a prime factor in the successful use of it. The exercise of strong authority is necessary, for military experience has repeatedly demonstrated that retreat can turn into disorganized rout. In the event that large numbers attempt to flee in a disorganized way, certain steps can be taken to bring order. Mobilization depots stocked with food and water can be set up along the routes of egress. As people become fatigued by their attempts to escape they will stop at the depots. There, good leaders with

public address systems can give an accurate account of the nature and extent of the damage. The able bodied persons can be regrouped to return as working parties, or to return to their own areas, depending on the circumstances.

Disaster Workers

The horror engendered by the sight of mass suffering, mutilated bodies and the like is likely to demoralize many of the disaster workers. As yet we do not know enough of what to expect to be able to state positively what qualities are needed for them. Suggestions have been made, however, that they be given an indoctrination course, similar to that given to combat soldiers, in which realistic sound films, approximating as closely as possible the kind of things they may witness, are shown. Since the sight of death and disfigurement around disaster stations and hospitals might undermine morale, it has been suggested that persons certain to die should be kept apart in "death wards."

INDIVIDUAL REACTIONS

In the initial period following the detonation of atom bombs people will be, in various degrees, anxious, fearful, doubt-ridden, apathetic, hysterical, moody, irritable and depressed. Dr. William Menninger compiled observations from all the psychiatrists who took part in relief operations during the Topeka flood of July 10, 1951. It was noted that there was a striking difference between the reaction of those suffering personal damage and those who did not. Those who did not were more obviously anxious and felt relief and even exhilaration on doing something constructive. On the other hand those who did suffer property damage could have saved themselves much of it. Despite adequate warning which came in time there was a reaction of *disbelief*. Indeed, of 10,000 who were forced to evacuate their homes, 3,000 had to be rescued by boat. These people who suffered damage were apathetic and not interested in combating further damage such as saving the water and sewer systems. As their apathy wore off they felt a great need to talk and experienced relief from it. Their anxiety most often was directed at trivial matters such as getting proper food for the dog, or that grandfather would miss a certain radio program. It was as if these people could not yet face squarely their loss and displaced their concern on to matters of little importance. Physicians can expect much of this during disaster which will take the form of concern over minor cuts and bruises, etc. Much time in disaster stations could be saved and relief given by having such persons as ministers assigned for the purpose of letting these people "talk out" some of their anxiety.

Individual psychic distress beyond normal initial reaction of fear probably will not be too apparent in the earliest postdetonation phase. It will occur, however, and is one of the things that physicians must watch for.

Causes

When attack with its destruction and loss of life comes, a natural reaction is to fight back and retaliate. This externalizing of aggressive action is a healthy one under justifiable circumstances because it diverts large quantities of psychic energy from oneself to useful work. Timid passive persons are more vulnerable to fear because they are unable to discharge dammed-up tension by aggressive action. Consequently anxiety tends to build up and become uncontrollable. Conscientious men and women will certainly not be immune to psychiatric breakdown. A person with an overly stern conscience may unnecessarily punish himself for even the unavoidable disastrous episodes which will be common in attack. Such a person should be watched for depressive symptoms and even suicidal tendencies. This kind of reaction might well be seen among parents, wardens, disaster workers and others when they feel their efforts have not been sufficient to save neighbors or family members. At the opposite end of the spectrum of conscience are persons who have so little compelling force of conscience that they will permit themselves to be overcome by fear rather than "carry on." Friendly firmness may be adequate to cope with some of them, but others will have such disabling symptoms as fugue states, paralysis, vomiting and mutism. It is quite conceivable that, in the first turmoil after attack, anxiety ridden incoherent vomiters might be mistakenly thought to be suffering from large doses of radiation.

There is one aspect of combat fatigue, familiar from World War II, that has important implications for civil defense. Combat fatigue was not entirely a problem within a given person, as was shown by the relative incidence of casualties in different units subject to comparable stress. It was repeatedly found that certain units within a battalion, regiment or division ran consistently higher or lower casualty rates than their neighboring units. As the distribution of vulnerable persons was similar in all organizations, the disproportionate incidence of psychiatric breakdown could not be attributed to disparities in that respect. The only tenable explanation was that the difference was owing to the influence of the group or combat unit which could offer realistic protection against external fear. The soldier did not fight alone. He had his buddies by him who shared his dangers and privations, and who he knew would help him if he were disabled. The more confidence he had in his platoon or company the less fearful

was the battle situation. But in civilian population this sort of support is more difficult to achieve. To bring it about, people must be organized into close units and trained to meet disaster. Unless a close working together of the smallest units in a community is fostered, the feeling of helpless isolation and inability to cope with the situation will add to the already heavy emotional burden all must bear. This in turn will increase the incidence of mental breakdown.

It seems clear that transient breakdown of the personality under stress depends on much more than an individual's capacity to stand fear and the realistic danger in which he finds himself. Group identification begins for a soldier in training, and it is here that the two important life-sustaining qualities should emerge. It is here that he gains confidence in the use of his weapons, and it is here that he learns the value of teamwork in battle. Thus the foundation for his own safety lies in the protective functioning of the unit. The life of the group is his personal life. It was frequently seen during the last war that even a timid soldier came to feel more secure by being in a powerful group, and often assumed the aggressive attitude of the whole organization. A leader sets the standard and motivation for his organization by example and behavior. The poor leader is quickly recognized by his men for inept management and unfair treatment, and a higher proportion of emotional casualties is to be expected in his command. In preparation for civil disaster, unless capable leaders are provided down to the very smallest grass roots, there will be a feeling of utter helplessness on the part of many. Adequate preparation and selection of suitable leaders is the outstanding epidemiological consideration in the problem of dealing with disaster.

HANDLING NEUROPSYCHIATRIC CASUALTIES

It is, of course, impossible to predict with any supposition of accuracy what the total psychiatric reactions would amount to. It would appear that in the beginning the vast majority of people will experience some panic, bewilderment and numbness which prevents them from taking in all the implications of what they have been through. These reactions will be recognized for what they are by all physicians and for the most part they are not to be considered a medical problem. Such symptoms as unwarranted aggressiveness, flight and fury will be dealt with by civilian or military authorities. No doubt many people will be concerned about how much radiation they have received, and may have all kinds of somatic symptoms that are connected in their minds with the effects of a presumed overdose of radiation. These reactions can be dealt with quite effectively by any physician. There will, of course, be

the anxious, hypochondriacal people to whom all reassurance is futile. In all probability these people will simply have to be turned away. There may be some bizarre syndromes such as the precipitation of psychoses, severe depression and the like. Some persons with such reactions, unless they become violent, could be watched carefully by family or friends. It was by no means rare during World War II to see persons who were considered schizophrenic, owing to the severity of personality disorganization, emerge completely from the psychotic-like state within days or even a few hours. The phenomenon was sometimes given the name "three-day schizophrenia." In disaster, evacuation of persons so affected would have to be through medical channels.

After the worst of the initial confusion has passed, some persons will be observed to have been psychically damaged to a degree greater than any ascribable to normal reaction to fear. It is then that the services of a psychiatrist will be most useful. Within any given community floating teams of psychiatric personnel could be organized. Ambulances or trucks could be assigned for this purpose. The personnel could consist of a psychiatrist, a driver and two or three attendants. Syringes and sedatives would be needed for the transport of very excited patients. These teams should have access to a special neuro-psychiatric center outside the immediate disaster area. Here patients would be retained who could be effectively treated in a short period of time by such methods as heavy sedation and group psychotherapy. All efforts should be directed toward getting back to work as quickly as possible. It might even be that work parties could be organized among recovered patients at such a center. Patients who could not be expected to respond to short-term therapy, say two or three days, would have to be further evacuated to a more permanent kind of installation, perhaps even augmented units attached to state hospitals.

Shattuck Avenue and Allston Way.

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CASE REPORTS

- **Cortisone, Corticotropin and Procaine in the Treatment of Corrosive Esophagitis**
- **Anaphylactic Reaction to Penicillin O**
- **Thrombotic Thrombocytopenic Purpura**
- **Nasal Myiasis**

Cortisone, Corticotropin and Procaine in the Treatment of Corrosive Esophagitis

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THE ACCIDENTAL or intentional ingestion of corrosive chemical agents frequently causes scarring and incapacitating stricture of the esophagus.

The site of stenosis is determined by development of segmental spasm, usually localized in one segment or another of the organ. The effects are inconsequential if only the epithelium is destroyed, but they may be severe if the submucosa or the muscular layer is involved, for the resultant healing by granulation tissue leads to progressive narrowing of the lumen of the esophagus by stricture formation, which usually becomes manifest in from one to three months after injury.

Measures to dilute and neutralize swallowed corrosive chemicals are of first importance in early therapy, and administration of local anesthetic agents may help diminish intense dysphagia.³ Efforts directed toward retarding and lessening the development of cicatrization by use of antibiotics and steroid hormones are in order in light of good results reported in the treatment of experimental corrosive esophagitis in rabbits when these agents were used.² It has been demonstrated that the inhibiting effect of cortisone on granulation tissue does not interfere with the process of epithelization.^{1, 4}

In a previously reported case, benefit was noted from administration of corticotropin (ACTH) and procaine by mouth early in the course of esophagitis caused by the ingestion of Lysol.³ Herein is another case in which cortisone was given intramuscularly and procaine by mouth to a patient with corrosive esophagitis due to ingestion of lye crystals. At autopsy later there was evidence that the therapy was effective in preventing the usual late cicatricial sequelae.

REPORTS OF CASES

A 74-year-old man was admitted to the Long Beach Veterans Administration Hospital four hours after

having ingested an unknown quantity of lye crystals in an attempt to kill himself. He had vomited bloody material soon after swallowing the lye and some two hours later had been given vinegar to drink, according to a son, who said also that the patient had been deteriorating mentally for several years and thrice before had attempted suicide.

At the time of admittance the patient was acutely ill, confused, disoriented and vomiting. He was unable to speak above a whisper and complained of difficulty in swallowing. The blood pressure was 150/80, the pulse rate 100 and the temperature 99.2° F. The lips and tongue and the palatal, buccal and pharyngeal mucosa were swollen, reddened and ulcerated. There was diffuse tenderness in the epigastrium.

A total of 16 ounces of half strength vinegar solution was administered orally during the first two hours of hospitalization. Penicillin, 300,000 units, in combination with Streptomycin, 0.5 gm., was given parenterally and continued at 12 hourly intervals. Parenteral hydration was carried out for three days and no food was given by mouth. Administration of 1 per cent procaine solution in doses of 15 cc. every two hours and 100 mg. of cortisone daily, given intramuscularly in divided doses, was begun on the second day. Procaine therapy was continued for one week and cortisone for 15 days.

Restraint of the patient was necessary, owing to confusion, restlessness, delusions and disorientation. These symptoms were present before cortisone administration was started and, except for occasional short periods during which the patient was oriented and cooperative and would exclaim, "What a fool I was," they continued throughout the period of hospitalization. As the patient did not urinate, a catheter was kept in place.

The oral and pharyngeal edema, ulceration and inflammation increased during the first three days, then gradually subsided. Epithelization of the lesions and complete healing took approximately 20 days. By the eighth hospital day the patient was swallowing liquids well but refused to eat and was fed by tube. During the first few days of tube feeding, creamy purulent exudate was present in the gastric aspirate, at first in moderate amounts and later in

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diminishing quantity. Fever, present generally but intermittently throughout the period of hospitalization, was attributed to bronchopneumonia and pyelonephritis. The penicillin-streptomycin combination originally instituted was changed to aureomycin, 500 mg. every six hours; and later, because of onset of diarrhea, terramycin, 250 mg. every six hours, was substituted. No recurrence of fever was noted after the twentieth hospital day. Upon advice of a psychiatrist that the patient was still suicidal and acutely psychotic, he was committed to a state mental hospital, where he died three weeks later. No pathologic change was noted in careful postmortem examination of the mouth, larynx, pharynx, esophagus and stomach. The mediastinum and pleural cavities were normal. The pathologic diagnosis was bilateral bronchopneumonia and cerebral arteriosclerosis with cortical atrophy.

(The previously mentioned and previously reported³ case of damage to the esophagus by Lysol was that of a man 40 years of age who was admitted to the Long Beach Veterans Administration Hospital six hours after the ingestion of two ounces of the caustic material in a suicidal attempt. Vomiting ensued and emergency treatment consisted of gastric aspiration. The body temperature was 101° F. at the time of admittance. The tongue and buccal mucosa were inflamed and there was a grayish membrane in the oropharynx. Corticotropin (ACTH) was given intravenously, 10 mg. daily in divided doses over a period of 18 hours with aureomycin 1.0 gm. daily for 17 days. On the third hospital day the patient was given 15 cc. of 1 per cent procaine solution to gargle and swallow after each meal. The following day a bland diet preceded by procaine swallows was well tolerated. Esophagram was normal one week following completion of therapy and the patient was followed for five months following discharge during which time he continued well.)

DISCUSSION

In neither of two cases in which therapy with cortisone or corticotropin and procaine by mouth was given to patients who had swallowed strong corrosive chemicals was there evidence of esophageal stricture. Of course there is no way of knowing in any given case whether or not esophageal strictures will result from the swallowing of corrosive chemicals. Moreover, it is possible that concentrated solutions may, upon contact with the lining of the oral and pharyngeal cavities, cause such powerful spasms of the pharyngeal muscles as to prevent the swallowing of the chemical. However, it was very strongly indicated by the symptoms—hematemesis, epigastric tenderness, severe dysphagia, purulent exudate in the stomach—that esophagitis did occur in one case at least and that the esophageal changes were similar to those noted in the buccal and pharyngeal mucosa. It may be conjectured that the administration of the steroid hormones, coupled with the use of antibiotics to reduce secondary infection, was respon-

sible for sufficiently suppressing granulation tissue formation to avert the formation of stricture in these two cases. In any event, these results are sufficiently encouraging to warrant further trial of this form of therapy in cases of corrosive esophagitis.

SUMMARY

Two suicidal patients suffering from the corrosive effects resulting from the ingestion of strong chemicals were treated with cortisone or corticotropin, antibiotics and procaine solution. Treatment was begun early in the course of the disease. Esophageal stricture did not result.

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Anaphylactic Reaction to Penicillin O

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IMMEDIATE ANAPHYLACTIC REACTIONS to penicillin G have been reported with increasing frequency. In several cases such reactions have caused death. It is likely that such untoward accidents are more common than published reports would indicate. The literature on the subject of anaphylaxis to penicillin was recently adequately reviewed by Feinberg, Feinberg and Moran.¹ In most instances a history of allergic disease was obtainable, penicillin had been given previously, often followed by untoward reaction, and the immediate reaction to intradermal test with dilute penicillin solution was positive.

Allylmercaptomethyl penicillin (penicillin O) has been described as "anti-allergic." Patients in whom allergic phenomena developed after administration of penicillin G, later received penicillin O without ill effect.^{2,3} While this observation may be generally true, one of the authors (H.B.) has observed unequivocal evidence of cross sensitivity of the delayed type. Feinberg and co-workers¹ demonstrated cross-antigenicity between penicillin O and penicillin G and predicted that penicillin O might be anaphylactogenic. The following case report is submitted to warn physicians against relying implicitly on the "anti-allergic" properties of penicillin O in the management of patients sensitive to penicillin G.

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CASE REPORT

A 23-year-old medical student who had rheumatoid spondylitis had been given a series of injections of penicillin-procaine intramuscularly on several occasions. He had received 300,000 units daily from January 3, 1950, to January 16, 1950, and from February 16, 1950, to March 2, 1950. The only untoward reaction at this time was mild local induration at the injection sites. He again received intramuscular injections of 300,000 units of penicillin-procaine daily from September 22 to September 24, 1950, and from October 31 to November 2, 1950. On June 3, 1952, a course of 1,000,000 units of penicillin-procaine daily was begun. After the injection on June 5 the patient noticed an immediate mild reaction, which consisted of mild nausea and excessive salivation. Penicillin was discontinued at this time. On June 10, coincident with administration of diphenhydramine by mouth, generalized pruritic, macular rash developed and then faded in two days.

Because an aortic systolic murmur had been noted previously, it was decided to administer penicillin prophylactically in preparation for removal of chronically infected tonsils. Accordingly, an aqueous solution containing 600,000 units of penicillin O was administered intramuscularly on June 17. Approximately three minutes after the injection the patient felt a sensation of tingling throughout his entire body. At the same time he had an urge to defecate, felt substernal oppression, and noted increasing dyspnea and a copious flow of saliva, which drooled to the floor. Within about two minutes his vision became blurred, and he lost consciousness. Upon examination the patient was observed to be diffusely flushed, sweating, and breathing with obvious difficulty. He was drooling large amounts of tenacious mucoid material. Breath sounds were distant, and no wheezing was observed. Radial pulsation could not be felt and the blood pressure was unobtainable, although the heart sounds were not abnormal. Epinephrine, 0.5 ml., was administered subcutaneously and repeated twice at intervals of 10 minutes. Diphenhydramine, 5 mg., was administered intravenously. The status of the patient seemed to improve slightly following the initial dose of epinephrine and diphenhydramine, but the pulse was palpable until shortly after plasma was given intravenously. At this time the blood pressure rose gradually, and consciousness returned. The patient awoke with a sensation of vise-like retrosternal oppression and dyspnea, especially on inspiration, although respirations at this time appeared only slightly labored. He vomited approximately 1,500 ml. of clear, tenacious mucoid material. The patient then improved rapidly, and when admitted to the University of California Hospital three hours later was essentially asymptomatic. No abnormalities were noted upon physical examination at that time. The blood pressure was 120/80 mm. of mercury. Leukocytes numbered 14,750 per cu. mm. of blood—78 per cent polymorphonuclear cells, 2 per cent eosinophils, 9 per cent lymphocytes and 11 per cent monocytes. Two

days later when the patient was discharged from the hospital as recovered, leukocytes numbered 6,300 per cu. mm. with 35 per cent polymorphonuclear cells, 34 per cent eosinophils, 2 per cent basophils, 22 per cent lymphocytes, and 7 per cent monocytes. The results of urinalysis were normal. No intradermal test for sensitivity to penicillin was carried out because of fear of reaction.

SUMMARY AND CONCLUSIONS

Severe anaphylactic shock due to penicillin O is described in a patient previously sensitized to penicillin G. Accordingly, the possibility of severe cross sensitivity to penicillin O must be considered in patients who have received penicillin G previously.

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Thrombotic Thrombocytopenic Purpura

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EXPERIENCE HAS SHOWN that the repetitious publication of reports concerning unusual disease syndromes has a tendency to elevate the syndrome in the consciousness of physicians. In this way, that which was rare becomes unusual, and that which was unusual becomes relatively commonplace.

It was in 1925 that Moschcowitz⁶ recorded observations describing a clinical entity characterized by fever, brownish pallor of the skin with petechiae, anemia, sundry neurological signs and the pathological findings of numerous thrombi in the terminal arterioles and capillaries. No further mention of this unusual clinical picture was made in the literature until 1936 when Baehr, Klemperer and Schiffrin² published a report which has become a classical reference for the clinical and pathological descriptions of this disease, as well as for the etiological concepts, with special attention to the pathogenesis of the thrombocytopenia which is an outstanding feature of this disease. The decrease in circulating platelets is thought to be brought about by the formation of thrombi, consisting of masses of agglutinated platelets, in capillaries and arterioles throughout the body.

Antemortem diagnosis of this entity, not reported until recently, came about by virtue of the more rapid recognition of the clinical features of throm-

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botic thrombocytopenic purpura. Prodromal symptoms, if there are any, may consist of lassitude and pallor. More often, however, there is no prelude and the sudden onset of the illness is characterized by weakness, headache, pallor and purpura. Fever is a constant finding and may occur at the outset or later. In addition to purpura and pallor, the skin may have a *cafe-au-lait* appearance or there may be a brownish cast to the underlying pallor. Clinical icterus is a frequent observation in the sclera, and hemorrhages and exudates may be noted in the fundi. Rales in the lung fields may reflect small pulmonary hemorrhages such as have been noted by pathologists, but later in the course a failing heart may be the cause of rales. The heart may vary in size from normal to enlarged. Tachycardia commensurate with the degree of fever is a feature of the disease. However, the focal necrosis in the myocardium which is seen later probably contributes to this increase in heart rate. Heart sounds may be poor for the same reason. Systolic apical murmurs, secondary to the progressing anemia, is another frequent finding. Hepatomegaly is not present, but splenomegaly has been noted in about one-third of the reported cases. Hemoptysis, melena and hematuria have been observed rather frequently as further manifestations of the spontaneous bleeding tendency in patients with this disease.

Neurological findings constitute an outstanding feature of thrombotic thrombocytopenic purpura. The depressed conscious state is manifested by irrationality, confusion, delirium, stupor or coma. Furthermore, but in no particular frequency or pattern, the following neurological signs were noted in the reported cases reviewed: nuchal rigidity, generalized convulsions, flaccid paraplegia, partial motor paralysis, hypoactive or absent deep tendon reflexes, agnosia, apraxia, aphasia and varied sensory changes.

From the laboratory studies come the findings that strongly characterize this bleeding diathesis and help to explain the basis for the changes noted on physical examination. Basically, the routine laboratory examinations indicate the presence of thrombocytopenia associated with hemolytic anemia. In addition, there is often moderate leukocytosis, sometimes associated with an increase in the immature forms of the myeloid series, even to the point of leukemoid reaction. In some respects the changes that can be noted by laboratory test are clearly identical to the findings in classical thrombocytopenic purpura: The bleeding time is prolonged, clot retraction is poor, the coagulation time is usually normal, and the reaction to a Rumpel-Leede test is positive. No evidence of arrest of megakaryocytic maturation (such as was noted by Dameshek in cases of hypersplenism and thrombocytopenia) is observable on examination of bone marrow. Indeed, the marrow may be normal, but usually there is an increase in the numbers of megakaryocytes. The increase may be associated with a considerable degree of erythroid hyperplasia resulting from the hemolytic process which is so often present in this disease. In one

recent case the diagnosis was made antemortem by examination of paraffin sections of the solid marrow particles which revealed granular thrombi lying within the lumen of the capillaries. Biopsy of skin or muscle tissue may reveal similar granular thrombi lying within the vessels.

The mechanism of the erythrocyte hemolysis in these instances has not been satisfactorily explained. Some investigators feel that it is a purely mechanical phenomenon caused by the extravasation of substantial quantities of blood through the injured or more permeable capillary endothelium; others feel that a hemolysin is involved, possibly related to a state of hypersensitivity. Be that as it may, the evidence for hemolytic anemia is undeniable. There is usually normocytic, normochromic anemia associated with a considerable degree of reticulocytosis. Nucleated erythrocytes are often seen, the number usually increasing as the disease progresses. Spherocytes, variable in number from time to time, may appear late.

Evaluation of the osmotic fragility of the erythrocytes by means of hypotonic saline solutions reveals no increase in cell fragility in most instances, but in those cases where an increase in fragility has been noted it has been related to the appearance and number of spherocytes. No increase in fragility has been seen when heat and acid techniques have been used. Patients with the disease have negative reaction to Coombs' test, and there is low-titred response to tests for auto-, iso- and cold agglutinins. The indirect phase of the serum bilirubin is elevated; and if the urine is not contaminated by blood, the absence of bilirubin and the increased amounts of urobilinogen so common to hemolytic diseases will be noted. Little or no alteration of the results of standard liver function tests has been noted, according to reported cases reviewed.

When specimens of tissue taken from a patient with thrombotic thrombocytopenic purpura are examined, the foundation for the foregoing panorama of symptoms, signs and laboratory findings that characterize thrombotic thrombocytopenic purpura becomes apparent. The most striking microscopic feature is that "thrombi," most of them made up of agglutinated platelets, are to be found in the capillaries and arterioles almost everywhere in the body—in the heart muscle, pancreas, adrenal and pituitary glands, brain, kidneys, intestinal tract, lungs, thyroid gland, liver, spleen, bone marrow, diaphragm and trachea. There is a rather considerable degree of variation of endothelial reaction to the platelet thrombus. In other thrombosed areas, however, there is no endothelial reaction, which has led some investigators to believe that thrombotic thrombocytopenic purpura is not primarily a vascular disease. Many of the thrombi are in the process of organizing when observed, and the inflammatory response to these occlusive lesions is surprisingly mild. It is to this multifocal entrapment of innumerable platelets in the thrombi that thrombocytopenia during life is ascribed.

Not all investigators believe that this thrombus formation is owing merely to a spontaneous agglutination of platelets; and for support the dissidents point to the relative rarity of thrombi in the lung capillaries and liver sinusoids. They feel, on the other hand, that first a vascular lesion is brought about by the swelling of the hyaline material in the vascular wall, that the lesion eventually ruptures and leaves a denuded area of endothelium, and that upon this defect the platelets are deposited in progressively greater numbers, gradually forming a thrombus which further extracts platelets from the passing blood stream.

Transfusions of blood, splenectomy and administration of antibiotics, anticoagulants, cortisone and corticotropin (ACTH) have been used for treatment, but in all known cases the patient died. However, the usefulness of the newer technique of platelet transfusion should be evaluated in this syndrome as well as the response to the calcium complex of Sequestrene, a new and useful anticoagulant.

REPORT OF A CASE

A 25-year-old white man was admitted to the Santa Clara County Hospital August 5, 1951, in a stuporous condition. Six days previously, his wife said, the patient began to feel general malaise, weakness and anorexia. A physician who was called apparently noted jaundice and advised the patient to go to bed. Malaise continued. The urine became dark yellow. Acute constant occipital headache developed. There were chills and fever but no diarrhea. Three days prior to admittance the patient vomited about a cup of bright red blood. Vomiting continued but the vomitus was not bloody. The next day nonproductive cough began and the patient also became irrational and unresponsive.

Up to the time of illness the patient was a healthy, vigorous construction worker. He had been in the South Pacific during World War II. Except for intermittent "flu" he had not had severe disease of the respiratory tract and there was no history of hemoptysis or pain in the chest.

Upon physical examination the patient was noted to be well nourished, well developed, confused, irrational and pallid. There was questionable jaundice. The body temperature was 102.4 F. Blood pressure was 140/60 mm. of mercury and the pulse rate 100 and regular. The pupils were equal, reacted to light and accommodation, and the sclera was questionably icteric. There was much clotted blood in the mouth. The tongue was papillated. The gums bled easily. No stiffness in the neck was noted. The chest was clear to auscultation. There was no enlargement of the heart. A soft systolic murmur was heard at the apex. No masses were palpable in the abdomen, which was soft. The liver, kidneys, and spleen were not palpable. The external genitalia were normal. Save for tarry feces on the glove no abnormality was noted in a rectal examination. There were many small pete-

chiae over both ankles. Some paresis of the left arm was noted. There was no edema or cyanosis. Reflexes were normal except for Babinski's sign in the left foot.

Erythrocytes numbered 1,500,000 per cu. mm. of blood and the hemoglobin content was less than 7.5 gm. per 100 cc. Leukocytes numbered 16,800 per cu. mm. Upon examination of a smear of peripheral blood, pronounced anemia, anisocytosis, poikilocytosis and polychromasia were noted, and macrocytes and normoblasts were frequently seen. Platelets were only rarely observed and no clumps were noted along the feathered edge of the side of the smear. There was moderate leukocytosis and a left shift in the granulocytic series with fairly numerous myelocytes and progranulocytes. No blast forms were noted. Results of examination of the urine were as follows: Specific gravity 1.020; color, red; pH 6; albumin, 3 plus; sugar, none; leukocytes, 1 to 2 per high power field; reaction for occult blood, 4 plus.

COURSE

On August 5 the patient was irrational, almost maniacal, and responded only briefly to phenobarbital. Blood could not be administered because of patient's thrashing about.

Next day the patient was comatose. The skin was moist and sweaty. Respirations were 50 per minute and forced, with some stridor. Many coarse inspiratory and expiratory rales were heard in the lungs. The heart sounds were distant and the pulse was regular at a rate of 140 to 160 per minute. The body temperature was 103.4° F. The patient died approximately 15 hours after admission.

POSTMORTEM EXAMINATION

Petechial hemorrhages throughout the body were seen macroscopically and there was evidence of gross bleeding into many of the body cavities.

The microscopic examination was extremely informative, for the nature and extent of the basic lesion was observed. It consisted of a platelet thrombus adjacent to an area of injured vascular endothelium. Platelet thrombi were seen throughout the various viscera and other tissues such as the striated muscle of the diaphragm, the pituitary and the central nervous system. The process apparently began as a fibrinoid degeneration involving the media and the subintimal tissue. This apparently accumulated and caused an intraluminal projecting mass with an intact endothelium. There was endothelial hyperplasia in this region. Apparently rupture of the endothelium overlying this mass occurred and was followed by agglutination and formation of a thrombus made up of platelets, which in turn propagated further platelet thrombi. These platelet thrombi were not noted in the liver or the lungs. Fairly large numbers of megakaryocytes were noted in the lungs.

SUMMARY

In a case of thrombocytopenic purpura complicated by bizarre mental and neurological changes and by hemolytic anemia, the possibility of thrombotic thrombocytopenic purpura should be considered. This is particularly true if the course is febrile and stormy and the skin is *cafe-au-lait*. The diagnosis may be established by appropriate examination of bone marrow or by biopsy of the skin or muscle tissue.

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Nasal Myiasis

DONALD G. CASTERLINE, M.D., Berkeley

IN THE SUMMER of 1953 an entomologist doing research work at Port Barrow, Alaska, used the aspirator method of collecting small insects. Two months later he began to have severe intermittent fever, shaking chills, frontal headaches, profuse sweats, and pronounced general malaise. These symptoms continued for about four days. A physician who was consulted at the time felt that the patient had an infection of influenzal type. Shortly thereafter, the patient spat a large number of insects that came down from the nasopharynx. These were four major groups of insects (Coleoptera, Collembola, Diptera, and Hymenoptera). The insects included three adult rove beetles (Staphylinidae), 13 fungus gnat larvae (Mycetophilidae), three egg parasitic wasps (Mymaridae), and about 50 spring-tails (Collembola).

Upon physical examination at that time a rather profuse mucoid discharge from the left nares was noted and there was reddening throughout the nasopharynx. X-ray films of the sinuses demonstrated punctate densities in the left antrum, both peripherally and centrally.

Irrigations of the left antrum were carried out and the material washed out was preserved in 95 per cent alcohol and studied microscopically. In it were many insect fragments that were identified as follows:

Order	Family	Species
1. Collembola	Isotomidae	Isotoma Olivacea Tullberg*
2. Coleoptera	Staphylinidae	Micralymna brevilungue Schiodte*
3. Diptera	Mycetophilidae	Boletina birulai (Lundstrom)†
4. Hymenoptera	Mymaridae	Mymar species*

* Adult, † Larvae.

There are two aspects of unusual interest in this case. First, none of the insects reported have been previously shown to cause myiasis in man. Second, it may be assumed that infestation occurred because of the aspirator method for collecting small sized insects, which is commonly used by entomologists.

2316 Dwight Way.

California MEDICINE

For information on preparation of manuscript, see advertising page 2

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EDGAR WAYBURN, M.D. San Francisco

EDITORIALS

Medical Schools Aided

MANY OF THE COUNTRY'S medical schools will be assisted this year by a gift of \$100,000 approved by the California Medical Association at its 1954 Annual Session.

This appropriation was approved by the Council and confirmed by official action of the House of Delegates. The contribution carries one string—only medical schools that are not state-supported institutions are to participate in allotments from this particular fund.

Back of this vote lies a rather sorry story of apparent lack of interest on the part of California physicians in contributing to the American Medical Education Foundation. Where voluntary contributions have failed to produce a decent sum, the policy-making bodies of the Association took it upon themselves to make up for this lack.

In the first year of operation of the American Medical Education Foundation, the California Medical Association voted, through its Council, to appropriate \$100,000 to this worthy cause. This vote was taken both as a means of supporting the fund drive and of encouraging other states to take similar steps.

The following year there was criticism of the Council's action, not because of a lack of sympathy with the objective but because of the question of policy as to whether or not the Council should be so generous with the Association's funds without express authority from the House of Delegates.

In view of this criticism the Council voted not to repeat the initial contribution but to try to organize a statewide drive to secure individual contributions. This was done for two years, with rather dismal results. Individual physicians found it convenient to forget about the need for financing medical schools. Some reported their own gifts, each to his own *alma mater*. Some questioned the propriety of

supplying funds to state-supported medical schools that had merely to go to a state legislature for needed money.

Conversely, some physicians gave generously, either to the American Medical Education Foundation or direct to their own schools. The sad part of this otherwise bright note was that the generosity of the few was more than outweighed by the paucity of gifts from the many. The average was extremely low.

In 1953, a proposal was made to the CMA House of Delegates to add \$25 per year to the Association's membership dues and to earmark this sum for the AMEF. This proposal was defeated by the House, which suggested that pamphlets be prepared for enclosure with the 1954 dues statements. This was done and the response was somewhat improved over the preceding year. Still, the average for the physicians of California remained low.

Suggestions have been made that the raising of funds for our medical schools should be placed in the hands of professional fund-raisers. Others have urged that a separate department of the Association be established for this single purpose. Still others have argued that the only way a decent fund may be raised each year is through an addition to the annual dues.

All these suggestions have met with objections, for a variety of reasons. The ultimate system for assuring a reasonable contribution from the physicians of California, year in and year out, has not yet been adopted. The need remains but the method has not yet arrived.

In view of this stalemate, the CMA Council took the action this year of again appropriating \$100,000 to aid medical education. This time the Council's action was taken directly to the House of Delegates. There, where several years ago the cry was raised that the House might not have approved the action

by the Council, this year there was no objection voiced to supplying the \$100,000 to the AMEF. The only condition was the one already mentioned, namely, that medical schools that are primarily state-supported are not to share in these funds. Such schools are expected, rather, to seek their operating budgets from their own state legislatures.

This appropriation will establish California in the higher echelons of the states, both in total funds contributed and in the average contribution per member. Such a position, however, will hold only for 1954 under the terms of the present commit-

ment. What will happen in 1955 or later years still is not known. It is evident that the needs of the medical schools will continue from year to year. It is evident that physicians must take an aggressive attitude in raising the funds that are needed for properly conducting our schools. It is evident that a sound, continuing program for raising funds must be set up. It is likewise evident that the hit-or-miss reliance on individual contributions is not the answer to this problem and this need.

Suggestions will be gratefully received. Contributions likewise.

Ladies Present

In this issue we sweep our plumes in greeting to the ladies of the Woman's Auxiliary to the California Medical Association. On page 49 appears the first of a proposed series of monthly reports of the various activities of the Auxiliary. It was prepared by Mrs. Frederick J. Miller, of Bakersfield, who in May of this year was installed as president of the organization.

We have long been aware, of course, of the Auxiliary's toil in behalf of the California Medical Association, but perhaps not keenly enough aware of it or of the specific results our womenfolk have achieved. The purpose of the new page is to serve as a bulletin board where the Auxiliary can post, for perusal by members of the California Medical Association, a record of its projects and achievements, citing chap-

ter and verse, naming names and stating amounts.

The design for the heading that is used on the new page—the seal of the Woman's Auxiliary superimposed upon the classical medical symbol for woman—was inspired by the kindled words of an anonymous writer of advertising copy. While casting about for a suitable idea for a heading for the page, we chanced upon an advertisement that read: "pretty, gentle, demure, soft, affectionate, receptive, maternal—in a word, *feminine*." This rather pleasantly emotional message was tied in with a picture of the symbol for woman. That solved our problem. If a mere symbol could mean so much, why, by all means we must use it.

We turn now, as ever we must, *to the ladies*. Page 49.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 406th and 407th Meeting of the Council of the California Medical Association, Los Angeles, Biltmore Hotel, May 8-12, 1954.

406th Meeting

The meeting was called to order by Chairman Shipman in Conference Room No. 8 of the Biltmore Hotel, Los Angeles, at 9:30 a.m., Saturday, May 8, 1954.

Roll Call:

Present were President Green, President-Elect Morrison, Secretary Daniels, Editor Wilbur, Speaker Charnock, Vice-Speaker Bailey and Councilors West, Wheeler, Loos, Sampson, Pearman, Ray, Shipman, Lum, Bostick, Teall, Varden, Heron, Frees, Carey, Kirchner and Reynolds. Absent for cause, Councilor Dau.

A quorum present and acting.

Present during all or a part of the meeting were Messrs. Hunton, Thomas, Clancy, Gillette and Pettis of C.M.A. staff; legal counsel Hassard; Ben H. Read of the Public Health League of California; county society executive secretaries Scheuber of Alameda, Jensen of Fresno, Young of Los Angeles, Foster of Sacramento, Nute of San Diego, Thompson of San Joaquin, Wood of San Mateo, Donovan of Santa Clara; Mr. K. L. Hamman, Mr. E. R. Paolini and Mr. Marshall Virello of C.P.S.; Mr. Rollen Waterston; Messrs. Leland Harris and Lee Simmons, University of California medical students; and Doctors J. R. Upton, Burt Davis, Fred Borden, Malcolm Merrill, Thomas N. Foster, Fred Ewens, Thomas LeValley, John W. Cline, Max Pickworth, Leon O. Fox, Edward C. Rosenow, Jr., J. Norman O'Neill, Joseph Josephson, Dwight H. Murray, Samuel R. Sherman, Francis T. Hodges, A. E. Larsen and Henry A. Randel.

1. Introduction of Guests:

The chairman introduced to the Council Messrs. Leland Harris and Lee Simmons, medical students at University of California Medical School, attending the session as guests of the Association representing the Student A.M.A. chapter at that school.

2. Membership:

(a) A report of membership as of May 1, 1954, was received and ordered filed.

(b) On motion duly made and seconded, reinstatement was voted for 3,229 delinquent members whose dues had been received since April 1, 1954.

(c) On motion duly made and seconded in each instance, Retired Membership was voted for the following 19 applicants: George W. Brown, Holland G. Hambleton, William J. Lakey, A. Edwin Larson, Arthur Mayer, Charles C. Prince, Cecil J. Smith, Guy W. Townsend, Julius N. Van Meter, Los Angeles County; John T. Leland, Marin County; Clyde E. Harner, Riverside County; J. Roy Jones, Sacramento County; Hans Barkan, Roscoe N. Gray, Mario Isnardi, Alexander S. Keenan, C. H. Woolsey, San Francisco County; Henry M. Benning, Neville T. Ussher, Santa Barbara County.

ARLO A. MORRISON	President
SIDNEY J. SHIPMAN, M.D.	President-Elect
DONALD A. CHARNOCK, M.D.	Speaker
WILBUR BAILEY, M.D.	Vice-Speaker
DONALD D. LUM, M.D.	Council Chairman
ALBERT C. DANIELS, M.D.	Secretary-Treasurer
IVAN C. HERON, M.D.	Chairman, Executive Committee
DWIGHT L. WILBUR, M.D.	Editor
JOHN HUNTON	Executive Secretary
General Office, 450 Sutter Street, San Francisco 8	
ED CLANCY	Director of Public Relations
Southern California Office:	
417 South Hill Street, Los Angeles 13 • Phone MADison 6-0683	

(d) On motion duly made and seconded in each instance, Associate Membership was granted to the following 79 applicants: H. S. Collissi, Robert M. Drake, W. A. Ketterer, Alameda-Contra Costa County; Alfred Bicunas, James Gonner, Fresno County; Mario J. Acquarelli, Forrest H. Adams, Molly B. Baker, Robert N. Baker, R. E. Bartlett, William S. Beck, Harold Birnbaum, Arthur J. Bischoff, William H. Blahd, Elena Boder, William J. Brown, John M. Buchanan, Weldon K. Bullock, Aaron A. Cohen, Sidney Cohen, D. Alfred Dantes, William J. Dignam, Ralph B. Elias, Margaret W. Fate, Solomon Fegen, Walter A. Flieg, Michael R. Frisch, Hal C. Gregg, Richard A. Griffith, William L. Gruber, Karl H. Haase, Frederic W. Haigh, Milton R. Hales, James A. Halsted, Percy G. Hamlin, G. A. Heibreder, Kenneth A. Heitmann, Joan E. Hodgman, Donald D. Hoytt, Maurice M. Hyman, Frank Isaac, Georgia L. Johnson, Melvin R. Kaplan, Raymond Kelso, Jr., Edward Leon King, Benjamin F. Klauermann, Richard A. Koonen, Baldwin G. Lamson, Richard E. Lewis, Martin Loebmann, Harry Mandel, Joseph I. Marx, Stephen H. Matthews, Eduardo Mora, Mary Mulloy, Elmer Olesky, Jay J. Palmer, Morton L. Pearce, Melvin R. Plancey, Josef Preizler, Catherine F. Roberts, Willoughby J. Rothrock, Bernard R. Rowen, Dayrel D. Smith, Dorothy Tatter, J. K. Van Deventer, Winston F. Whipple, David Whyte, Robert H. Wier, Roscoe C. Williams, Claire M. Wyndham, Los Angeles County; George Nasser, Frank W. Pinger, Napa County; Sam Christian, Sacramento County; William S. Mowrey, San Diego County; Thomas Feichtmeier, Russel V. Karleen, Henry I. Kohn, Max Pegram, San Francisco County.

(e) On motion duly made and seconded, reductions of dues were voted for 21 applicants, for reasons of postgraduate study or protracted illness.

(f) Report was made on a disciplinary case in the Butte-Glenn County Medical Society, in which the accused had been voted expelled from membership. An appeal may be made to the Council within 60 days.

3. *Financial:*

(a) A report of bank balances as of May 1, 1954, was received and ordered filed.

(b) On motion duly made and seconded, it was voted that pregnancy did not constitute grounds for a reduction of dues.

(c) Chairman Lum of the Auditing Committee presented the proposed budget for the 1954-1955 fiscal year. On motion duly made and seconded, it was voted to submit this budget to the House of Delegates, subject to possible inclusion of additional items to be considered prior to the first session of the House.

4. *Blood Bank Commission:*

(a) Dr. John R. Upton, chairman of the Blood Bank Commission, reported that negotiations were under way for the acquisition by the San Joaquin County Medical Society of the blood bank currently operated in Stockton under other auspices. He recommended a loan of \$36,500 to the San Joaquin County Medical Society from the revolving loan fund previously authorized by the Council, so that this transfer might be effected.

On motion duly made and seconded, it was voted to loan the San Joaquin County Medical Society or its blood bank (if separately incorporated) \$36,500 to assist in the establishment of a blood bank in Stockton.

(b) Dr. Francis West presented a check for \$6,959 from the San Diego Blood Bank, this payment representing the repayment of the entire loan advanced to that blood bank by the Association.

5. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 405th meeting of the Council, held March 21, 1954, were approved. The chairman pointed out that this approval included approval of an appropriation voted at that time to aid in the program of the Santa Clara County Medical Society.

6. *State Department of Public Health:*

Dr. Malcolm Merrill, State Director of Public Health, reported that 13,000 to 14,000 children would be inoculated with the Salk polio vaccine and that the state virus laboratory would cooperate in checking results. He also gave the tables for use of gamma globulin during 1954.

Dr. Merrill also reported on a legislative interim committee which is considering the proposals for allocation of state funds in aid of construction of private non-profit hospitals.

Dr. Merrill stated that his department was attempting to decentralize the administration of its crippled children's services by placing administration in the counties. County administration is now operative in 17 counties, covering about 75 per cent of the state's population and he asked assistance in reaching about ten more counties to bring the total coverage up to about 90 per cent or more. On motion duly made and seconded, it was voted to encourage the county medical societies to aid in establishing county administration of crippled children's services, where economically feasible.

7. *Santa Clara County Medical Society:*

Drs. Fred Borden and Max Pickworth, representing the active staff of O'Connor Hospital, San Jose, criticized the Council for having voted funds to the Santa Clara County Medical Society to aid in a campaign to augment the staff organization of the hos-

pital. They reported that the hospital bed occupancy was about as great, numerically, as in the old hospital.

It was pointed out that members of the Santa Clara County Medical Society had voted 255 to 66 in disapproval of the hospital's medical staff policies and 231 to 100 in favor of an assessment of \$10 a member to raise funds to work for changes in this policy.

Dr. John W. Cline reported on his efforts to effect conciliation in this controversy and expressed his opinion as to the need for such conciliation, which had earlier been refused by the hospital administration.

On motion duly made and seconded, it was voted that the chairman appoint a special committee to study the overall situation and report back to the Council. The chairman appointed Dr. John W. Cline chairman of this committee and Drs. Howard Naffziger, T. Eric Reynolds, Ivan C. Héron and Sidney J. Shipman as members.

8. *American Medical Education Foundation:*

Dr. John W. Cline urged the Council to provide funds to assist the American Medical Education Foundation in assisting the medical schools of the country. After voting to defer action on this proposal, the Council on May 9, after motion duly made and seconded, voted to add \$100,000 to the budget for the American Medical Education Foundation for distribution among the non-state-operated medical schools.

9. *Standing Committees:*

The chairman appointed Dr. Dwight L. Wilbur chairman of a committee to recommend members for the standing committees, with Drs. H. C. Loos and Francis E. West as the other members. At the recessed meeting of May 12, the committee proposed and the Council, on motion duly made and seconded, voted approval of these nominations:

Committee on Associated Societies and Technical Groups—Dr. Charles E. Grayson, Sacramento, 1957.

Committee on History and Obituaries—Dr. J. Marion Read, San Francisco, chairman, reappointed, 1957.

Committee on Hospitals, Dispensaries and Clinics—Jay J. Crane, Los Angeles, chairman, reappointed, 1957.

Committee on Industrial Practice—John E. Kirkpatrick, San Francisco, 1957.

Committee on Medical Economics—L. H. Fraser, Richmond, Chairman, reappointed 1957.

Committee on Medical Education and Medical Institutions—Loren R. Chandler, San Francisco, 1957.

Committee on Military Affairs and Civil Defense—Justin J. Stein, Los Angeles, chairman, reappointed, 1957.

Committee on Postgraduate Activities—J. E. Young, Fresno, reappointed, 1957.

Committee on Public Policy and Legislation—Dan O. Kilroy, Sacramento, reappointed, 1957.

Committee on Scientific Work—George C. Griffith, Los Angeles, 1957.

Physicians' Benevolence Committee—Axcel E. Anderson, Fresno, chairman, reappointed, 1957.

Committee on Public Relations—J. Lafe Ludwig, Los Angeles, reappointed. Frank A. MacDonald, Sacramento, reappointed.

10. *Medical Services Commission:*

Dr. Ralph Teall presented the supplemental report of the Medical Services Commission, in which the Council was requested to enter several resolutions into the House of Delegates.

On motion duly made and seconded, it was voted to introduce the following resolution in the House of Delegates:

Resolved, That the California Medical Association proceed with vigor in the study, development and implementation of the Usual Fee Indemnity Plan.

On motion duly made and seconded, it was voted to introduce the following resolution in the House of Delegates:

WHEREAS, Many people are anxious to know in advance what their attending doctors' fees will be in order that they may secure adequate insurance or other means to pay those fees without worry about the financial problem at the time they need medical care; and

WHEREAS, Nearly all doctors already have fees which are their customary charges for the particular service involved; now, therefore, be it

Resolved, That the California Medical Association urge each of its members (a) to set up a list of his own fees, (b) to make this list known to his own patients, and (c) to assure his patients that he will make no higher charges except by agreement with the patient concerned before service is given.

On motion duly made and seconded, it was voted to introduce the following resolution in the House of Delegates:

WHEREAS, Many physicians in the state of California, and many component medical societies have felt a desire to provide service benefits with greater certainty of coverage for subscriber groups within their own areas; and

WHEREAS, They have suggested that this should be done by the raising of the "income ceiling" in C.P.S. operations; and

WHEREAS, This House of Delegates has already gone on record as recommending experimentation in this field on the county society level with a view to ultimate development of improved forms of medical care insurance based on demonstrated experience and results; therefore, be it

Resolved: That this House of Delegates recommend:

1. That the California Physicians' Service develop a form of service coverage based on a \$6,000 income ceiling, with appropriate increases in the dues structure and in the schedule of fees to be paid, and in the formulation of a uniform schedule of fees;

2. That each county society be authorized to request that this form of C.P.S. coverage be offered within its own area, in addition to the present contracts;

3. That physician members of C.P.S. in a county which has not requested the higher ceiling, abide by the income ceiling (in providing full services without additional charge) for beneficiaries who have secured this coverage in some other county medical society area.

On motion duly made and seconded, it was voted to introduce the following resolution in the House of Delegates:

WHEREAS, The Medical Services Commission is making a continuing study of the economics of medical practice, and acts as an advisory committee to the Council of the California Medical Association; and

WHEREAS, The recommendations made to the Council of the California Medical Association by the Medical Services Commission are of vital importance to both rural and urban members of the California Medical Association, whether general practitioner or specialist; now, therefore, be it

Resolved, That the number of members of the Medical Services Commission be increased from nine to twelve.

Recess:

At this point, 6:40 p.m., the Council, on motion duly made and seconded, voted to recess until 7:30 a.m., Sunday, May 9, 1954.

11. *Public Policy and Legislation:*

Dr. Dwight H. Murray, chairman of the Committee on Public Policy and Legislation, discussed the federal legislative situation. Mr. Ben H. Read, executive secretary of the Public Health League of Cali-

fornia, stressed the importance of participating in the primary elections to be held June 8.

12. *Committee on Postgraduate Activities:*

Dr. Edward C. Rosenow, Jr., reported that the committee would not require additional funds in the next year. He stated that the University of Southern California would have thirteen half-hour television lectures available and the committee would like to make kinescopes for postgraduate education.

13. *Audio-Digest Foundation:*

Dr. Rosenow, as editor of Audio-Digest, reported the foundation should be operating at a profit in the near future. He stated the need for a physician who might be physically handicapped, to handle medical library work.

Mr. Hassard discussed the necessity for a permanent board of directors for Audio-Digest Foundation.

On motion duly made and seconded, it was voted that the loan of \$10,000 to Audio-Digest Foundation previously authorized, be for a period of five years with amortization at the discretion of the foundation's directorate. The Board of Directors was authorized to set a satisfactory compensation for the Editor when it sees fit to do so.

14. *Committee on Adoptions:*

On motion duly made and seconded, it was voted to thank the members of the special Committee on Adoptions for their services and to continue this important work with another committee to be named by the chairman with the consent of the Council.

15. *Woman's Auxiliary:*

On motion duly made and seconded, it was voted to appoint Drs. Matthew N. Hosmer and John E. Vaughan to the Advisory Committee to the Woman's Auxiliary to the C.M.A.

16. *Vocational Nursing:*

Dr. Morrison discussed the few replies he had received to his distribution of the proposed curriculum for vocational nurse training and asked for additional suggestions.

Recess:

At this point the Council was declared in recess until 7:30 a.m., Monday, May 10, 1954.

17. *Crippled Children's Services:*

Dr. West discussed the request of the State Department of Public Health for appointment of a committee to consider the advisability of recognizing for services in this field the specialists certificated by other healing groups. On motion duly made and seconded, it was voted to appoint Dr. Francis M.

McKeever of Los Angeles as chairman of this committee, with Drs. John W. Green of Vallejo and Hartzell Ray of San Mateo as the other members.

Recess:

At this point the Council was declared in recess until 7:30 a.m., Tuesday, May 11, 1954.

18. California Medicine:

Editor Dwight L. Wilbur of CALIFORNIA MEDICINE urged that the institutional advertising of the Wine Advisory Board of California be accepted in the journal, provided such advertising did not mention any brand or trade names. On motion duly made and seconded, it was voted to accept this advertising, Drs. Sampson, Teall, Carey and Charnock being recorded as voting in the negative.

19. Committee on Industrial Accident Commission:

Dr. Frank J. Cox, committee chairman, reported that the proposed industrial accident fee schedule had been taken under advisement by the Industrial Accident Commission of the State of California and that a decision by the commission was expected in the near future, possibly following an additional public hearing.

20. Audio-Digest Foundation (see also No. 13):

Mr. K. L. Hamman reported on his study of the business setup of Audio-Digest Foundation. As of March 31 there were 373 general subscribers for the weekly service, 73 for the biweekly surgical service, 57 for internal medicine and 33 for obstetrics, for a total of 536. Mr. Pettis reported the total now at 650.

Mr. Hamman stated that a special reserve fund was being established to handle subscriptions paid in advance, with provision for the foundation to draw one-twelfth of this fund each month. He recommended that the Board of Directors of Audio-Digest Foundation be increased and Southern California physicians added, so that frequent board meetings might be held without necessitating undue traveling by more distant members.

Recess:

At this point the Council was declared in recess until 7:30 a.m., Wednesday, May 12. The recess was taken out of respect to Councilor O. W. Wheeler because of the death of his father.

21. Rural Health Conference:

On motion duly made and seconded it was voted to invite the Council on Rural Health of the American Medical Association to hold its 1956 Rural Health Conference in California.

22. Committee on Blue Cross-Blue Shield:

The chairman read a report from Dr. Lewis A. Alesen, chairman of the Committee on Blue Shield-Blue Cross, in which he urged the appointment and

continuance of a liaison committee between the three organizations represented. On motion duly made and seconded, it was voted to accept this report with thanks and to implement the suggestion of a continuing liaison committee.

23. Student American Medical Association:

Speaker Charnock reported on a meeting of Student A.M.A. members held in Los Angeles on April 25, with about 400 attending. On motion duly made and seconded, it was voted to provide funds for a similar meeting of medical students in the San Francisco area later in the year.

On motion duly made and seconded, it was voted to commend Dr. Charnock for his valuable services in arranging and conducting this meeting in cooperation with the Public Relations Department.

24. Fifty-Year Pin for Late Doctor George H. Kress:

On motion duly made and seconded, it was voted to award a Fifty-Year Membership Pin to Mrs. George H. Kress in memory of her late husband and to ask Dr. William R. Moloney, Sr., to accept the pin in her behalf.

25. C.P.S. Fee Schedule:

Dr. Francis J. Cox reported that his committee had considered changes in the C.P.S. fee schedule to accompany an increase in the income ceiling and had voted (1) to make immediate changes in only four items, covering home and office visits and (2) to eliminate the total fee concept in the existing schedule. On motion duly made and seconded, it was voted to accept this recommendation, the chairman to report this action to the C.P.S. Reference Committee in the House of Delegates.

Dr. Cox also reported that his committee did not feel able at this time to recommend that lump sum payments be provided for by C.P.S. in case of major illness but that the C.P.S. Board of Trustees had agreed to run a test for several months on nine major illnesses, to gather evidence on the feasibility of employing this fee schedule method. The committee recommended that C.P.S. be authorized to run such a test for three months, to determine if this method is workable, financially sound and an answer to the problem of handling these cases, a recommendation already accepted by the C.P.S. Trustees.

Dr. Cox further recommended that the Medical Services Commission be instructed to ask the county medical societies to follow the uniform pattern of the Blue Shield Commission in developing schedules of usual fees. On motion duly made and seconded, it was voted to ask the Medical Services Commission to proceed along these lines.

On motion duly made and seconded, it was voted to thank Dr. Cox and his fee schedule committee for their fine work.

26. *Committee on Public Relations:*

Dr. Lum requested that the Committee on Public Relations be asked to undertake a study of the public relations activities of the Association and the related activities of California Physicians' Service. It was agreed to make such a request.

27. *Farewell from Retiring President:*

President John W. Green expressed his thanks to the Council for its cooperation and asked that all members remain honest and charitable, with no hard feelings in cases of decisions adverse to individual sentiments. He expressed a fond farewell at the conclusion of his fourteen years as a member of the Council.

28. *Committee on Malpractice Insurance:*

Drs. Kirchner and Bostick and Mr. Hassard reported on malpractice insurance problems occurring in various parts of the state, including availability of coverage, premium rates, group programs, and other factors. On motion duly made and seconded, it was voted to create a special committee to investigate the entire subject of malpractice insurance and to report back to the Council with such recommendations as it may consider desirable.

Adjournment:

There being no further business to come before it, the Council was adjourned at 9:20 a.m., Wednesday, May 12, 1954.

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407th Meeting

The meeting was called to order by Chairman Shipman in Conference Room No. 2 of the Biltmore Hotel, Los Angeles, at 7:00 p.m., Wednesday, May 12, 1954.

Roll Call:

Present were President Morrison, President-Elect Shipman, Speaker Charnock, Vice-Speaker Bailey, Secretary Daniels, Editor Wilbur and Councilors West, Loos, Sampson, Pearman, Ray, Lum, Bostick, Teall, Varden, Heron, Frees, Carey, Reynolds, Randel and Sherman. Absent for cause, Councilors Wheeler and Kirchner.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Thomas, Clancy, Pettis and Gillette of C.M.A. staff; legal counsel Hassard; K. L. Hamman; Rollen Waterson; and Drs. Edward C. Rosenow, Jr., and E. V. Askey.

1. *Election of Chairman:*

On nomination duly made and seconded, Dr. Donald D. Lum was unanimously elected chairman and assumed the chair.

2. *Welcome to New Members:*

The chairman expressed a welcome to Dr. Henry A. Randel of Fresno and Dr. Samuel R. Sherman of San Francisco, newly-elected members of the Council.

3. *Election of Vice-Chairman:*

On nomination duly made and seconded, Dr. Ivan C. Heron was unanimously elected vice-chairman of the Council.

4. *Appointments:*

(a) On motion duly made and seconded, Dr. Albert C. Daniels was unanimously appointed Secretary-Treasurer.

(b) On motion duly made and seconded, Dr. Dwight L. Wilbur was unanimously appointed Editor.

(c) On motion duly made and seconded, John Hunton was unanimously appointed Executive Secretary, the Executive Committee to decide on an employment contract.

(d) On motion duly made and seconded, Peart, Baraty & Hassard were unanimously appointed legal counsel.

5. *Committee on Adoptions:*

Several names were suggested for the Committee on Adoptions. On motion duly made and seconded, it was voted to leave the selection of this committee to the Executive Committee.

6. *Committee on Public Health and Public Agencies:*

Dr. Frank J. West, chairman, reported that a Commission on Chronic Alcoholism was to be formed, with three physician and six lay members. A budget of \$100,000 is to be provided for its studies.

Dr. West also reported that the chronic disease section of the State Department of Public Health has asked the Rockefeller Foundation for \$100,000 to study the preventive aspects of chronic disease and to determine a future program.

On motion duly made and seconded, it was voted to relieve Dr. Hollis Carey from further duties with the committee and to name Dr. Henry A. Randel as his successor; Dr. West remains chairman and Dr. Loos a member.

7. *Loyalty Oaths:*

Dr. Charnock asked that study be given to the possible screening of security risks in the medical schools, especially in view of recent cases where physicians have been drafted as Army privates because they failed to qualify for medical commissions by virtue of declining to sign the required loyalty oath.

8. *Appointment of Auditing Committee:*

The chairman, with the consent of the Council, named Dr. Ivan Heron chairman and Drs. T. Eric Reynolds and Samuel R. Sherman members of the Auditing Committee.

9. *Trustees of California Physicians' Service:*

On nominations duly made and seconded, it was unanimously voted to appoint Drs. A. A. Morrison and Ivan C. Heron as trustees of California Physicians' Service, leaving one vacancy at this time.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 8:55 p.m.

1 1 1

Executive Committee Minutes

Tentative Draft: Minutes of the 243rd Meeting of the Executive Committee of the California Medical Association, Los Angeles, Biltmore Hotel, May 12, 1954.

The meeting was called to order by Chairman Lum in Conference Room No. 2 of the Biltmore Hotel, Los Angeles, at 9:00 p.m., Wednesday, May 12, 1954.

Roll Call:

Present were President Morrison, Speaker Charnock, Auditing Committee Chairman Heron, Council Chairman Lum and, ex-officio, Secretary Daniels and Editor Wilbur.

A quorum present and acting.

Present by invitation were executive secretary Hunton and legal counsel Hassard.

1. *Election of Chairman:*

On motion duly made and seconded, Dr. Ivan C. Heron, chairman of the Auditing Committee, was

unanimously elected chairman of the Executive Committee.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 9:05 p.m.

Medical Dates Bulletin

THIS BULLETIN of the dates of postgraduate education assemblies and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: C. A. Broadbuss, M.D., 1036 North Center Street, Stockton 3, California.

OCTOBER

California Society of Internal Medicine, Yosemite National Park, October 2, Dr. Walter Beckh, 384 Post Street, Suite 603, San Francisco 8.

San Francisco Heart Association, 25th Annual Postgraduate Symposium on Heart Disease, October 6-7-8, Gladys Taylor Daniloff, 604 Mission Street, San Francisco 5.

Los Angeles County Heart Association, Annual Professional Symposium on Heart Disease, October 13-14, Mr. Robert Pike, 316 S. Bonnie Brae, Los Angeles, executive director.

San Diego County Heart Association, Annual Professional Symposium on Heart Disease, Friday, October 15, H. Jack Hardy, 1651 Fourth Avenue, San Diego 1, executive director.

California Academy of General Practice, Sixth Annual Scientific Assembly, Los Angeles, October 24, 25, 26, 27, Wm. W. Rogers, 461 Market Street, San Francisco, executive secretary.

NOVEMBER

Los Angeles Urologic Research Convention, Los Angeles, November 8-12.

AMERICAN MEDICAL ASSOCIATION

Clinical Session, 1954, Miami, November 30-December 3.

Clinical Session, 1955, Boston, November 29-December 2.

In Memoriam

CADY, DONALD W. Died in Pasadena, April 14, 1954, aged 60, of a gastric ulcer. Graduate of New York University College of Medicine, New York, 1921. Licensed in California in 1925. Doctor Cady was a member of the Los Angeles County Medical Association.



CRAWFORD, WILLIAM W. Died in San Diego, May 13, 1954, aged 80. Graduate of the University of Colorado School of Medicine, Denver, 1911. Licensed in California in 1912. Doctor Crawford was a member of the San Diego County Medical Society.



CRUMRINE, HENRY C. Died April 4, 1954, aged 77. Graduate of the University of Wooster, Medical Department, Cleveland, Ohio, 1900. Licensed in California in 1934. Doctor Crumrine was a member of the Los Angeles County Medical Association.



CUSHMAN, RUGGLES A. Died recently in Santa Ana, aged 97. Graduate of Dartmouth Medical School, Hanover, New Hampshire, 1882. Licensed in California in 1891. Doctor Cushman was a retired member of the Mendocino-Lake County Medical Society, and the California Medical Association.



FERNANDEZ, MANUEL L. Died in Richmond, April 27, 1954, aged 77. Graduate of the University of California Medical School, Berkeley-San Francisco, 1900. Licensed in California in 1901. Doctor Fernandez was a retired member of the Alameda-Contra Costa Medical Association, the California Medical Association, and an associate member of the American Medical Association.



FORT, WALTER A. Died May 23, 1954, of coronary thrombosis, aged 63. Graduate of the University of Michigan Medical School, Ann Arbor, 1917. Licensed in California in 1939. Doctor Fort was a member of the Solano County Medical Society.



HANSEN, VICTOR M., JR. Died in Loma Linda, May 2, 1954, aged 30. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1949. Doctor Hansen was a member of the Los Angeles County Medical Association.

POWELL, BARTON J. Died in Grass Valley, May 6, 1954, aged 51, of coronary artery disease. Graduate of the University of Illinois College of Medicine, Chicago, 1929. Licensed in California in 1929. Doctor Powell was a member of the Placer-Nevada-Sierra County Medical Society.



PROSTERMAN, FRANCES. Died May 5, 1954, aged 66. Graduate of the Stritch School of Medicine of Loyola University, Chicago, Illinois, 1921. Licensed in California in 1944. Doctor Prosterman was a member of the Los Angeles County Medical Association.



ROONEY, HENRY M. Died in Los Angeles, June 6, 1954, aged 75. Graduate of the University of Michigan Medical School, Ann Arbor, 1903. Licensed in California in 1904. Doctor Rooney was a member of the Los Angeles County Medical Association.



SEAVEY, MINNIE A. Died in Sacramento, April 19, 1954, aged 84. Graduate of the Cooper Medical College, San Francisco, 1907. Licensed in California in 1908. Doctor Seavey was a retired member of the Sacramento Society for Medical Improvement, the California Medical Association, and an associate member of the American Medical Association.



STELLAR, ROBERT W. Died in Redondo Beach, April 14, 1954, aged 59. Graduate of Harvard Medical School, Boston, Massachusetts, 1923. Licensed in California in 1926. Doctor Stellar was a member of the Los Angeles County Medical Association.



WOOD, CHARLES M. Died in Sacramento, April 19, 1954, aged 46. Graduate of the University of Southern California School of Medicine, Los Angeles, 1936. Licensed in California in 1936. Doctor Wood was a member of the Sacramento Society for Medical Improvement.



WOLFF, RUDOLF. Died in San Rafael, May 20, 1954, aged 65, of a cerebral stroke. Graduate of the Universität Heidelberg Medizinische Fakultät, Baden, Germany, 1912. Licensed in California in 1938. Doctor Wolff was a member of the Marin County Medical Society.



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

SILVER ANNIVERSARY

On May 8, the Woman's Auxiliary to the California Medical Association was 25 years old. Forty-six charter members met on that date in 1929 at Coronado to organize an auxiliary and elect state officers. Our first president was Mrs. Henry S. Rogers of Petaluma. During her term of office, ten county auxiliaries were organized, and the total membership at the end of the first year was 472.

* * *

TWENTY-FIVE YEARS OF PROGRESS

The original membership of 46 has grown to a grand total of 5,559, making California's the largest state auxiliary in the national organization. Recognizing that our steady growth and progress is owing to the wise leadership, the loyalty and devotion of our past presidents, we respectfully dedicate this first issue in CALIFORNIA MEDICINE to them:

1929-30	Mrs. Henry S. Rogers.....	Petaluma
1930-31	Mrs. James F. Percy.....	Los Angeles
1931-32	Mrs. Wm. H. Sargent.....	Oakland
1932-33	Mrs. Frank E. Coulter.....	Santa Ana
1933-34	Mrs. A. M. Henderson.....	Sacramento
1934-35	Mrs. Schuyler Doane.....	Pasadena
1935-36	Mrs. Thomas J. Clark.....	Philo
1936-37	Mrs. A. C. Thornton.....	San Diego
1937-38	Mrs. Hobart Rogers.....	Oakland
1938-39	Mrs. Clifford Wright.....	Los Angeles
1939-40	Mrs. F. N. Scatena.....	Sacramento
1940-41	Mrs. A. E. Anderson.....	Fresno
1941-42	Mrs. Harry O. Hund.....	San Rafael
1942-43	Mrs. F. G. Lindemulder.....	San Diego
1943-44	Mrs. C. C. Landis.....	Paradise
1944-45	Mrs. Ralph Eusden.....	Long Beach
1945-46	Mrs. Ralph Eusden.....	Long Beach
1946-47	Mrs. H. E. Henderson.....	Santa Barbara
1947-48	Mrs. Norman Morgan.....	San Francisco
1948-49	Mrs. L. K. Gundrum.....	Newport Beach
1949-50	Mrs. Raymond T. Wayland.....	San Jose
1950-51	Mrs. Wm. R. Molony, Jr.....	Los Angeles
1951-52	Mrs. Stanley R. Truman.....	Oakland
1952-53	Mrs. Raleigh W. Burlingame.....	San Diego
1953-54	Mrs. Carl Burkland.....	Sacramento

* * *

WE CONTINUE TO GROW

Last year we welcomed back into the state organization two county auxiliaries—Mendocino-Lake and Napa. Each unit had previously been organized twice, so we hope that "third time's a charm" holds true. Mendocino-Lake has 19 members, and Mrs. C. R. Kroeger of Ukiah is the president. Mrs. Harry Ehrlich is the president of the Napa Auxiliary, which has a paid-up membership of 26.

Santa Barbara County recently organized a northern branch in Santa Maria, with Mrs. Emmett N. McCusker as chairman. This branch now has 15 members, and nurse recruitment will be one of its first projects.

Los Angeles County has four branches—Long Beach, Pasadena, Valley and Southeast. Each of these branches carries on extensive projects of its own in addition to the work all do together as the Los Angeles County Auxiliary, which is, by the way, the largest county auxiliary in the nation. It has a membership of 1,471 and there are only 13 state auxiliaries with that many members!

* * *

CONTRIBUTIONS REACH ALL-TIME HIGH

Although we are not primarily a money-raising organization, we make generous contributions in money as well as time, as we assist our medical societies in their program for the advancement of medicine and public health.

Last year, under the capable leadership of Mrs. Carl Burkland, state president, our philanthropic donations reached a new high.

Mrs. Samuel Gendel of Fullerton, state chairman of the American Medical Education Foundation, reported a contribution of \$7,150 to this vitally important project. In helping to finance medical education, the Auxiliary is also creating good public relations; we are proving to the members of our home communities that physicians are raising their own funds so that the high standards of medical education can continue without federal aid.

Last year, the grand total from the Auxiliary to the American Medical Association was \$32,629.96. The amount will be considerably higher for the year ended June 30, 1954, since every state has been putting increased emphasis on this important project.

* * *

Physicians' Benevolence is another of our projects which set a fine record during the past year under the chairmanship of Mrs. Charles J. Hart of Walnut Creek. Our donation was \$3,370, which goes into the Fund set up in 1940 by the California Medical Association. In his annual report to the C.M.A., Chairman Axel F. Anderson, M.D., said that the original goal of \$60,000 should be at least doubled in order to provide sufficient reserves. Our Auxiliary goal is \$1 per member, which will mean a check for more than \$5,000. Won't you help us, by encouraging the Auxiliary in your own county to expand its efforts for this worthy cause?

MRS. FREDERICK J. MILLER, *President*

NEWS & NOTES

NATIONAL • STATE • COUNTY

HUMBOLDT

Dr. John N. Chain, a member of the California Medical Association for 50 years, was presented with his 50-year pin during a special telecast over KIEM-TV last month. Dr. Chain, who had been unable to be present to receive the pin at the CMA Annual Session in Los Angeles, accepted the award from Dr. Clarence Crane, president of the Humboldt County Medical Society.

LOS ANGELES

At a recent meeting of the California Society of Allergy, the following officers were elected: President, Dr. Norman Shure, Los Angeles; president-elect, Dr. Lazarre J. Courtright, San Francisco; secretary-treasurer, Dr. Ben C. Eisenberg, Huntington Park.

PLACER

Dr. Ruth M. Moldenhauer of Springfield, Illinois, recently was appointed health director of Placer County. Dr. Moldenhauer, who was graduated with an M.D. degree at the University of Wisconsin in 1947, received a master's degree in public health at the University of California in 1951.

SAN FRANCISCO

The gold-headed cane, traditional symbol of "qualities most representative of the true physician" among medical students being graduated from the University of California School of Medicine, San Francisco, was awarded this year to Mervyn F. Burke of Berkeley. The award was made at pre-graduation ceremonies by Dr. William J. Kerr, emeritus professor of medicine. Runners-up for the award were John H. Hanson, of Arvin, and Allan B. McMie of Camino.

As a further part of the rites, Dr. Kerr gave to Dr. Arthur L. Bloomfield, professor of medicine, Stanford University School of Medicine, a gold-headed cane that he himself had received a year before. This cane is passed on each year to the speaker chosen, for outstanding physicianship, to address the senior class at its pre-graduation ceremonies.

* * *

Dr. Frank Gerbode, associate clinical professor of surgery at Stanford University School of Medicine, has been elected president of the San Francisco Heart Association, succeeding Dr. Maurice Eliaser, Jr. Other physicians elected to office were Dr. Hilliard J. Katz, secretary; Dr. Charles A. Noble, Jr., and Dr. Malcolm S. M. Watts, members of the executive committee of the board of governors.

Dr. Howard C. Naffziger, professor emeritus of neurosurgery at the University of California School of Medicine, was made an honorary member of the German Neurological Society at a recent ceremony at Cologne University in Germany.

* * *

A separately organized Department of Psychiatry has been formed in the Stanford University School of Medicine in San Francisco, and Dr. George S. Johnson, professor of medicine since 1933, has been appointed executive head of the new department, it was announced recently by Dean Windsor C. Cutting.

Psychiatry previously has been a part of the school's Department of Medicine. The reorganization was necessary, it was said, to meet increasing needs of patients and to provide for expansion and research in the field.

* * *

Two guest speakers, two members of the staff and seven residents of the Fort Miley Veterans Hospital gave papers at the Annual Residents' Program of the hospital's Medical Service, held June 4, 1954. The program was:

The Status of Cortisone and Rheumatoid Arthritis in 1954—Ephraim P. Engleman, M.D., assistant clinical professor of medicine, University of California, attending physician, Fort Miley.

Current Day Concepts of Pulmonary Hypertension—Arthur Selzer, M.D., assistant clinical professor of medicine, Stanford University School of Medicine, attending cardiologist, Fort Miley.

The Etiology of Bronchogenic Carcinoma—H. Corwin Hinshaw, M.D., clinical professor of medicine, Stanford University School of Medicine.

The Etiology of Leukemia—Henry Kaplan, M.D., professor of radiology, Stanford University School of Medicine.

Intrapleural Use of Triethylenemelamine in Lymphomas—Jack F. Mangum, M.D., intermediate resident in medicine.

Response of Patients Receiving Long-Term Cortisone to Intravenous Corticotropins—E. W. Fredell, M.D., senior resident in medicine.

Treatment of Acute Leukemia with 6-Mercaptopurine—Marvin D. Richards, M.D., intermediate resident in medicine.

Primary Tumors of the Heart—Frederic A. Costales, M.D., junior resident in medicine.

Hypokaliemia Due to Functioning Adrenal Tumor—Laurence Foye, M.D., junior resident in medicine.

Late Electrocardiographic Findings in Posterior Myocardial Infarction—Arthur O. Stone, intermediate resident in medicine.

Debunking the Bernheim Syndrome—Herbert W. Bradley, M.D., senior resident in medicine.

SAN JOAQUIN

Operation and control of the Stockton Regional Blood Center was transferred from the San Joaquin County Red Cross Chapter to the San Joaquin County Medical Society on July 1.

The changeover was effected during June without loss of service to the community.

The local Red Cross voted to drop the blood program after its national headquarters announced a decision to withdraw most of its financial support from civilian blood banks.

Under management by the medical society the bank becomes a nonprofit community blood bank serving the counties of San Joaquin, Stanislaus, Calaveras and Tuolumne. It now joins the eleven other member banks of the California Medical Association's statewide "life line."

SONOMA

More than 100 members from the medical societies of Sonoma, Napa, Solano, and Marin counties attended the Four County Annual Get-Together last month at the Sonoma Golf and Country Club. Following an afternoon of golf, marked by high winds and higher golf scores, a social hour and a steak dinner wound up the evening's festivities. Brief speeches were given by California Medical Association officers. The Sonoma County Medical Society was the host for this year's event, presided over by Dr. William J. Rudee, president.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Three-day Symposium in San Diego: Highlights of Clinical Endocrinology, July 28; Use of Physical Medicine in General Practice, August 4; Problems in Anesthesia, August 11.

Fall Schedule:

Surgical Anatomy—September 8 to November 10, Wednesday evenings.

Fundamental Principles of Radioactivity—September 16, 1954, to July 7, 1955, Thursday evenings.

Evening Medical Lecture Series—September 27 to December 13, Monday evenings.

Dermal-Abrasives-Planing Techniques—September 29 to November 3, Wednesdays.

Three-Day Symposium in Riverside: Highlights of Endocrinology, October 13; Anesthesia, October 20; Peripheral Vascular Diseases, October 27.

Anesthesiology—November 4 to 5.

Dermatology—November 10 to December 15, Wednesdays.

Contact: Mrs. Margaret H. Griffith, Assistant Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Conference on General Surgery

Date: September 13 through 17, all day, at Medical Center. This conference will be offered for the purpose of stressing the newer concepts, methods of diagnosis, treatment and techniques in surgery. Throughout the session emphasis will be placed on the diagnosis and treatment of malignant lesions. Instruction will consist of didactic periods, panel discussions, and

actual operative demonstrations which will be televised from the operating room to the lecture hall. This program will be designed for general practitioners who are doing surgery. The class will be limited.

Conference on Fractures and Diseases of the Bone

Date: September 20 through 23, all day, San Francisco County Hospital. The program will cover the newer concepts, methods of diagnosis, treatment and techniques. There will be didactic lectures, panel discussions, and actual demonstrations of illustrative cases. The class will be limited.

Medicine for General Practitioners

Date: September 21 to December 7, Tuesday evenings, East Oakland Hospital, Oakland. This is a continuation course which is offered every year, with complete change of program and speakers. Class limited.

Evening Lectures in Medicine, Part I and Part 2

Date: September 16 through December 9, Thursday evenings, Mills Memorial Hospital, San Mateo. This is also a continuation course which will be of interest to both internists (Part 1) and to physicians in general practice (Part 2).

Symposium on Endocrine Diseases and Geriatrics

Date: October 22, 23, 24 (week-end), University of California Extension Building, 540 Powell Street, San Francisco. A review of recent developments in both fields, with suggestions for the management of patients past the age of fifty.

Contact: Stacy R. Mettier, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22, California.

COLLEGE OF MEDICAL EVANGELISTS

Diseases and Injuries of Bones and Joints (4 weeks)
Full time.

Date: July 5 through 30, 1954. Dr. Taylor's office and various hospitals. Tuition: \$100.00. G. Mosser Taylor, M.D., Alonzo J. Neufeld, M.D., and Associates. Unless otherwise stated or arranged, courses will be held in Osler House, corner State and Michigan Avenues.

Contact: Chairman, Section on Graduate and Postgraduate Medical Education, College of Medical Evangelists, 312 North Boyle Avenue, Los Angeles 33, California.

UNIVERSITY OF SOUTHERN CALIFORNIA

Dermatology and Syphilology—Beginning September 13, 1954. Fee: \$1,000.

This is a full-time course of twelve-month duration, carries thirty-two units credit toward the graduate degree of Master of Science, and is accredited by the American Board of Dermatology and Syphilology. It is designed for physicians who plan to take the examination for certification by the Board. Dr. Maximilian E. Obermayer is the course director. The course is presented only every third year and open to not more than twelve qualified physicians.

Contact: Robert S. Cleland, M.D., director, Medical Extension Education, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33, California.

INFORMATION

Federal Medicine

Its Impact on the Medical Care Of the American People

WALTER B. MARTIN, M.D., Norfolk, Virginia
President, American Medical Association

DURING THE PAST TWO DECADES there has been a vast expansion of federal medical services, as there has been an extension of federal activities into many other fields of American life. This has been brought about partly by numerical additions to the veterans population and to the maintenance over the past 13 years of greatly expanded armed forces. It has been further magnified, however, by policy and administrative changes which have brought more and more persons into the federal medical system.

At the same time, the needs and desires of the general population for more medical services have increased. Advances in the science of medicine have changed the pattern of medical care. With control of the acute infectious diseases and the consequent prolongation of life expectancy, a constantly increasing segment of our population is arriving at an age characterized by a larger percentage of the chronic diseases. Here is indeed a paradox. The very success of medicine has increased rather than diminished our medical burden. Medical schools have expanded their output of physicians to a greater degree than the population increase. The auxiliary troops of medicine, registered nurses, practical nurses and technicians of all kinds have been increased in numbers, but still the demand persists for more and more personnel in all fields of medicine. The requirements of public health, local, state and national, have grown rapidly. There is a constant need for more trained workers in the field of medical research. Improvement in transportation, availability of more and better technical equipment and the aid of technical assistance have all added to the output of the individual physician. Still the demand is not entirely satisfied. What should or can be done? The usual answer from the social planners is to obtain federal funds to finance medical and nursing education and to provide scholarships. With many other demands on the

manpower pool, there must be a point when the number that go into medicine and its allied branches will be limited by the supply of properly equipped students.

For these reasons, it may be well to seek means of making more efficient use of our medical resources, and to consider whether by dispersion of our personnel and facilities, we are impairing their effectiveness.

At the present time the federal government is engaged in five major medical activities in addition to 52 other health programs scattered throughout various departments and bureaus of the federal government. We are concerned today, however, with the five major federal efforts in the medical field. These five agencies, the Army, the Navy, the Air Corps, the Public Health Service and the Veterans Administration, are building hospitals and giving medical services to many of our people, aside from those for whom they are primarily responsible. They are each operating residency training programs and in some instances intern training programs, in addition to the long established training programs of the voluntary teaching hospitals. This brings the federal medical services into competition not only with each other, but with civilian facilities for physicians, nurses and trained medical personnel of all kinds. Fifteen years ago these federal agencies did not loom large in the total picture of American medicine, but with their great expansion in recent years they now absorb an important percentage of our total medical resources. It may be well to examine this situation and to enlighten ourselves on how this growth has taken place.

The medical services now provided by the Veterans Administration had their origin in rather recent times, and stem from an amendment to the War Risk Insurance Act of 1917. It is true that prior to that time the old soldiers' homes furnished domiciliary care for aged and dependent veterans. The Act of 1917 provided in respect to service-connected disabilities

"that there shall be furnished by the United States such reasonable governmental medical, surgical and hospital services . . . as the director may determine to be useful and necessary."

In 1921 the veterans bureau was established and certain then existing federal hospitals were transferred to that agency. In 1923 the service-connected load on veterans hospitals was so diminished that a considerable number of vacant beds existed. The Congress at that time authorized the care in Veterans Administration hospitals, if beds were available, of veterans of the Spanish American War, Philippine Insurrection and the Boxer Rebellion, suffering from neuropsychiatric or tuberculous diseases, regardless of service connection. Here was established a precedent for the care by the federal govern-

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Read in Opening Assembly, Southern Medical Association, 47th Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

ment of non-service-connected cases. It also established the fallacy that the authorization of the use of surplus beds would not eventually lead to continued expansion of facilities in order to make sure what vacant beds did exist. It was provided in the Act that the additional services offered were not mandatory but were only available on the basis of existence of vacant beds.

The effect of this Act was to bring about material expansion of Veterans Administration hospitals and facilities. Under successive acts of the Congress restrictions as to diseases treated, length of time of service and service-connection were removed and except for the temporary retreat following the Economy Act of 1933, there has been a steady extension of Veterans Administration medical care furnished the veterans population. The Act of 1934, now the most untouchable of acts, removed all restrictions imposed during the economy drive of 1933 and subsequently led to rapid expansion of the Veterans Administration medical program. Before the impact of World War II, the Veterans Administration hospitals were expanded from a bed capacity of 15,400 beds in 1923 to 61,849 in the year 1941. This growth has continued at an accelerated rate and as of May 1953 there are 121,624 authorized beds. Admissions to these hospitals per annum have been increased from 130,456 in 1936 to 509,720 in 1951.

The Veterans Administration is now operating under the amendment passed in 1934 that provided

"that any veteran of any war, who was not dishonorably discharged, suffering from disability, disease, or defect, who is in need of hospitalization or domiciliary care and who is unable to defray the necessary expenses therefor (including transportation to and from veterans facility) shall be furnished necessary hospitalization or domiciliary care, including transportation, in any Veterans Administration facility within the limitation of existing beds in such facilities irrespective of whether the disability, disease or defect was due to service. A statement under oath by the applicant on such forms as may be prescribed by the Administrator of the Veterans Administration shall be accepted as sufficient evidence of inability to defray necessary expenses."

The administrators have consistently held to the position that under the law they could not go back of the oath to prove fraud. Under the pressure of recent circumstances, however, there has been a tendency to alter this position somewhat. Congress, also by specific act, has established the dictum that if a certain time interval exists between discharge from service and development of 32 disease entities, they automatically become service-connected.

We now have in this country a veterans population of over 20,000,000. This has been increasing at the rate of about 1,000,000 a year. As of July 31, 1952, the Veterans Administration operated 154 hospitals. These hospitals had an average of 759 beds, or a total of 116,986 beds. Also, in 1952 there were 18

new hospitals, and four additions with a total bed capacity of 13,231 beds under construction. Moreover, there were six new hospitals of 5,000 beds in the advance stage of planning. The 13,000 beds under construction in 1952 were estimated to cost the taxpayers \$264,000,000. As of June 30, 1953, over 104,000 patients were under Veterans Administration hospital care. The Veterans Administration's Annual Report for the year showed that only 35 per cent of these patients were under treatment for conditions resulting from service in the armed forces. The remaining 65 per cent were under Veterans Administration care for illnesses or accidents incurred in civil life, and in no way related to military service in peace or war. In 1951, approximately 512,000 patients were discharged from Veterans Administration hospitals. Of these about 85 per cent or 440,784 were general medical and surgical cases, exclusive of tubercular and psychiatric cases. Of nearly half a million veterans in the general medical and surgical category treated in the course of a year in Veterans Administration hospitals, only 15.4 per cent were under treatment for conditions incident to military service. The remaining 84.6 per cent were non-service-connected, and had signed an oath of inability to pay for the hospital and medical care furnished at the expense of the American taxpayer. How large a proportion of these statements were fraudulent, no one at present can tell. It is doubtful, however, that the percentage of indigency is so high in our veterans population. A recent report to the Congress by Controller General Lindsay Warren records a survey of 500 veterans picked at random who were being treated in Veterans Administration hospitals. Of this number 336 had annual incomes of \$4,000 to \$50,000 with 25 of these having assets between \$20,000 and \$500,000.

The total medical budget of the Veterans Administration that was appropriated in 1953 by the Congress was \$692,499,212, of which \$600,000,000 goes to hospital operation and domiciliary care. Excluding the tuberculous and neuropsychiatric cases, non-service-connected cases in general, medicine and surgery are responsible for over half of this cost.

One large factor in cost is the length of stay in veterans hospitals compared to community hospitals. General medical and surgical cases remain in veterans hospitals for an average of 30.4 days, as compared to the average for civilian voluntary hospitals of approximately 7.5 days. The average cost per day for a general medical and surgical case in a veterans hospital, as of May 1953, was \$18.24, or an average cost for the veterans in this group of \$555, as against a national average of \$148 in voluntary hospitals. Possibly, the most startling figure in the field of cost of veterans hospital operation is that from 1944 to 1952, when there was an increase of

from \$72,000,000 to over \$500,000,000 or approximately 700 per cent.

In 1952, the Veterans Administration employed about 175,000 individuals; 132,000 of these are connected with the veterans medical program. Six thousand were added during the year 1951. Veterans Administration employs 4,160 full-time physicians and nearly 3,000 part-time physicians. They have also utilized the services of a number of residences.

These figures are presented in order to point out the cost in materials, dollars and manpower of the operation of the present veterans medical system, and to indicate that the major part of this cost is involved in the care of veterans who are being treated for conditions incurred in civil life and not connected with their military experience.

The American Medical Association has repeatedly urged that the federal government furnish the best possible medical care for veterans whose medical disability stems from service in the armed forces. We believe the American people are willing and glad to support such service. We believe for the present, and until state and local facilities are more generally available, that good public policy requires that veterans with neuropsychiatric and tuberculous conditions unable to pay for hospital care should be treated in federal hospitals, whether or not service-connected.

We believe that the veteran with other than a tuberculous or neuropsychiatric condition, who has received no disability by reason of service in the armed forces and requires hospital care for conditions having origin in civil life, should not be a charge on the federal government. He should, if able, pay his own way and care for himself in the manner of his own choice. If he is unable to pay, he should be the responsibility of his community, as in the case of any other needy citizen.

The problem of medical and hospital care of dependents of service personnel in federal hospitals also deserves consideration. We as physicians are not primarily concerned with whether the government should provide for the medical care of dependents of servicemen as a part of their reward for service. This is a general problem connected with the rate of pay and other entitlements of the soldier; it is of interest to all of us as citizens and one that must be decided by the Congress. As physicians we are interested in how and when and where that service is provided. The present situation is eminently unfair to servicemen as a whole. Medical care is available only in those areas accessible to military hospitals and dispensaries. It is not available to those dependents remote from these facilities. The size of the group of service dependents is not exactly known, nor is the number of beneficiaries of government medicine in this field capable of determination,

since there are no figures available. In certain particular areas estimates can be made. In the obstetrical field it is known that from 13,000 to 15,000 babies are delivered each month in military hospitals. It is also known that in certain geographical areas the number of dependents receiving care in service institutions comprises a considerable portion of the total patient load. We are interested in the effect of this situation on the voluntary hospitals and on the abilities of civilian medical personnel and institutions to provide good medical care for the general population.

The present system of providing medical service for dependents of service personnel has grown without planning or much thought, from a small acorn planted in 1884 that now is a mighty oak. At that time the Congress provided that in isolated army posts where civilian medical care was not available, the medical facilities of the post could be utilized for the care of service dependents if beds were available. By a series of amendments, judicial interpretations and departmental regulations, this privilege has been extended to all three branches of the service, and to the Coast Guard dependents. It has gone further than that. No longer are the civilian medical facilities of a community considered nor the provision concerning available beds. If beds are not available they are constructed. If medical personnel is not sufficient, it is drafted. If there is not enough paramedical personnel, it is hired. This attitude has led to the rapid expansion in many areas of the medical services offered to the dependents of service personnel, often to the detriment of the civilian facilities in these areas. It has also necessitated the drafting of additional physicians and the enlistment or employment of additional nurses and all types of medical technical personnel.

The American Medical Association believes that the original intent of the law still holds and that in foreign service and in areas in this country without sufficient civilian medical service and facilities to provide medical care to dependents, it should be provided by the armed services. We also believe that the Congress should decide whether medical and hospital care for all dependents of service personnel everywhere should be a part of the pay of the soldier, but that for the most part this care should be provided in civilian facilities. We believe if medical care is to be provided for this group it should be on an equitable basis so as to reach all dependents. This could be provided by increasing the basic pay scale for those having dependents or by some form of prepayment insurance for dependents.

The Hill-Burton Hospital Survey and Construction Act has been in effect since 1946. During that time the federal government had appropriated \$542,500,000 for hospital construction. This has been matched

by double this amount from state and local sources. In addition, considerable hospital construction, financed by local resources alone has been stimulated. Civilian hospital construction has been carefully planned to meet the needs of all of our people. The civilian system now finds itself in competition with federal hospitals not only for doctors, nurses and technicians but for patients as well. As patients, whether dependents of service personnel or non-service-connected veterans, are drawn from a community into federal hospitals, the ability of that community to support its own hospitals is impaired and the cost per unit of hospital service rises. As the federal hospital system expands and there is need for more doctors, nurses and other personnel, the community is depleted of the technical and professional help that is necessary for good community medical service.

We find ourselves now with five federal hospital programs engaged in intern and residency training and utilizing the services of several thousand interns and residents. At the same time there are thousands of residencies and internships vacant in accredited voluntary hospitals. This element of an intern and residency program in these five federal medical services has been a strong influence in drawing into the federal hospitals non-service-connected veterans and dependents of service personnel. It is clear that in order to carry on an adequate medical training program a sufficient number of patients must be available and they must be so distributed as to provide diversified clinical teaching material. This material must include males, females, children and people in different age groups. Good training programs cannot be supported by the diseases and accidents of a healthy young age group as seen in service personnel, nor can sufficient teaching material be found in the service-connected group of veterans. It is necessary, if these training programs are to continue and be

acceptable, that they maintain a sufficient flow of patients distributed throughout the various categories needed.

Certain questions now naturally arise. Can we as a people afford six intern and resident training programs with the consequent dilution of our available teaching and other medical resources? Can we afford the continued competition between separate systems of medical care devoted to the interest of special groups? These powerful forces are tending to draw more and more patients into the federal orbit. With the aging of the veterans population and a continuation of the present veteran policy, in another 20 years the capacity of the veterans hospitals will have to be doubled. If provision for the medical care of all service dependents is by law provided in federal hospitals, an enormous increase in their facilities and medical personnel will be required. That can only mean a progressive decline in the strength and usefulness of our great voluntary hospitals and teaching system. It must also mean a great increase in cost which will be transmitted to all of us in the form of an additional tax burden. Already a large number of people have a vested interest in federal medical care. Other groups may be added such as federal government employees, their dependents, the indigent and medically indigent in our general population. Proposals have been made and bills have been introduced into the Congress that would move us further into the zone of federal responsibility for the hospital care of additional segments of our population.

Of this we can be sure. The present situation will not remain as it is. Federal medicine will continue to expand as it has expanded during the past 15 years unless the trend is reversed by the informed and determined action of the taxpaying and voting population of this country.

521 Wainwright Building.



THE PHYSICIAN'S *Bookshelf*

PHARMACOLOGY AND THERAPEUTICS—A Textbook for Students and Practitioners of Medicine—Second Edition. Arthur Grollman, Ph.D., M.D., F.A.C.P., Professor and Chairman of the Department of Experimental Medicine, Lecturer in Pharmacology and Toxicology, Southwestern Medical School, University of Texas. Lea & Febiger, Philadelphia, 1954. 866 pages, 127 illustrations, \$10.00.

The general style of Cushny's original textbook on pharmacology has been continued in this second edition of Professor Grollman's excellent book. An outstanding improvement over Cushny's organization of topics is placing locally acting drugs, the effects of which in most instances are poorly understood, to a position in the book following the discussion of drugs with well established pharmacodynamic effects. Under the old Cushny plan, the student was introduced to pharmacology by a discussion of locally acting drugs, such as irritants and protective agents, with the result that he often lost interest and direction at the beginning of the course of study. Grollman starts the discussion of specific drugs with the general anesthetics with which most students already have some acquaintance and which have a dramatic action. He makes the pedagogic mistake, however, of a too detailed introductory chapter on general principles which the student can not understand until he has specific acquaintance with several types of drugs. It is to be hoped that most instructors who use this fine book will not bore their students with the introductory chapter at the outset, but will use Chapter 1 piecemeal as the occasion arises during the discussion of specific drugs. For example, dosage rules can be discussed in connection with Morphine and Other Opium Alkaloids (Chapter 4) to much greater advantage than at the beginning of the course. Likewise, each method of administration should be discussed at the time that the first drug requiring the method is discussed. Thus, administration by inhalation should be discussed in connection with general anesthetics, oral administration, distribution and metabolism under alcohol, hypodermic administration under morphine, etc. The same applies to the various types of pharmaceutical preparations. In other words, the pedagogic principle of going from the specific to the general should be followed. For reference purposes, most of the material in the Introduction would be placed to better advantage in a closing chapter on principles.

In the preparation of this book, Grollman has drawn upon his extensive personal experience in both clinic and laboratory, as well as his familiarity with the pertinent literature. Many of the illustrations are from his own records. Few authors have such a dual experience as both laboratory scientist and clinician. This experience has permitted the author to select in most instances the right laboratory evidence and principles of pharmacology for understanding the clinical uses of drugs, with excellent figures and graphs to show how drugs act. The book is of interest, therefore, to student, clinician, and laboratory investigator and the

teacher should have no difficulty in maintaining student interest in the subject matter.

Grollman's *Pharmacology and Therapeutics*, in its 866 pages, contains 32 chapters, two appendices and a well organized index. Chapter 1 is the introductory chapter on principles of pharmacology and therapeutics, with definitions. Chapter 2 discusses inhalation anesthetics, Chapter 3 is a thoroughgoing description of the effects of alcohol, and opium alkaloids, synthetic analgetics (Grollman prefers the spelling "analgesic"), hypnotics and sedatives and the anti-convulsants make up the subject matter of chapters 4, 5, 6 and 7. Central nervous system stimulants (except amphetamine and methamphetamine) are compressed into Chapter 8. Chapter 9 contains several well-drawn illustrations of autonomic neuroeffector pathways and a general discussion of autonomic pharmacology, which sets the stage for the next six chapters on epinephrine, ergot, acetylcholine, physostigmine, atropine, nicotine, quaternary ganglionic depressants, histamine and the antihistaminics and related compounds. Then follow chapters on local anesthetics, cardiovascular drugs, gastrointestinal drugs, diuretics, an introductory chapter on chemotherapy, the sulfanamides, antibiotics, antimalarials, amebicidal drugs, local antiseptics, hormones, vitamins, hematopoietic agents, coagulants and anticoagulants, antihematopoietic drugs, water, ions and gases, metal-oids, heavy metals, immunizing preparations, protein hydrolysates and diagnostic agents. Prescription writing is adequately discussed in the six pages of Appendix A. Appendix B is entitled "Classification of Drugs According to Their Therapeutic Uses"; this is helpful to the physician in selecting a drug for a particular therapeutic indication.

* * *

ELECTROCARDIOGRAPHY. E. Grey Dimond, M.D., Professor and Chairman, Department of Medicine; Director, Cardiovascular Laboratory, University of Kansas Medical Center, The C. V. Mosby Company, St. Louis, 1954. 261 pages, 272 illustrations, \$14.00.

Electrocardiography by E. Grey Dimond, M.D., is the first edition of a textbook proposed as a new method of teaching "blackboard electrocardiography" for the general practitioner and medical student. Dr. Dimond contends that electrocardiographic teaching of beginners can best be accomplished by a series of organized lectures and not by "bedside teaching"; accordingly, this book represents such a series of lectures. Many teachers in the field of electrocardiography would not agree with this basic premise.

The section on electrocardiographic machine artifacts is a valuable one for the beginner and the problems in the technique of taking a record are well summarized; unfortunately, no mention is made nor illustrations shown of errors in placement of extremity electrodes. The chapter on vectors is very well illustrated. Throughout the book references are appropriately inserted in the text itself rather than at the close of chapters.

There are many minor points of issue to be taken with the author. Recent work has shown that it is the Q-U interval and not the Q-T interval that is prolonged in hypokalemia; furthermore, the correlation between the electrocardiogram and the serum potassium level is often crude in contrast to the author's statement that the electrocardiographic changes can be fairly closely correlated with the level of potassium. He advocates measurement of the intrinsicoid deflection from the onset of the Q to the peak of the R wave, which has been demonstrated by autopsy material not to be the best correlation with the left ventricular wall thickness as contrasted with a measurement from the nadir of the R to its peak. The section on the diagnosis of A-V nodal rhythms should have emphasized the inverted T wave in lead aVF in these conditions, a fact that has been omitted. The reviewer also takes issue with the author in his statement that measurements of amplitude in right and left ventricular hypertrophy are "misleading and no rules should be applied"; there are many clinicopathological studies that prove the worth of amplitude measurements in both of these conditions. In the part devoted to the Master exercise tolerance test, it should have been mentioned that a reversal of the T wave in lead III alone is not a "positive test"; furthermore, it should also have been noted that the test is to stop in the event thoracic pain develops. Although there are six illustrations in the book of the Wolff-Parkinson-White syndrome, there is no illustration of a more common condition such as subendocardial infarction. Lastly, it would have been preferable to illustrate the section on acute cor pulmonale with precordial and unipolar extremity leads as well as with standard leads alone.

The foregoing judgments may be based on mere differences of opinion and approach to this field. The reviewer feels that the following criticisms are of matters in which the book falls short of its proposed objectives and fails to secure for itself a desired place in the field of electrocardiographic textbooks. The author interprets electrocardiograms in his book in a "vector manner" which, in the opinion of the reviewer, is still experimental and not practical at this time for the individuals at whom the book is aimed. Secondly, the chapter on electrocardiography in congenital heart disease is suddenly diverted to a discussion of the cardiodynamics, murmurs, x-ray catheter and fluoroscopy findings in this field. It is not fitting for a book on electrocardiography to contain such detailed discussions. Furthermore, it is not appropriate for an electrocardiographic textbook to discuss therapy of arrhythmias; and one could easily take issue with the author's statements on combined quinidine and digitalis therapy. In conclusion the reviewer feels that the book can be recommended for the general practitioner and medical student only for its discussion and illustrations of vectors and for its illustrated classroom electrocardiographic teaching devices.

* * *

MANUAL OF MEDICAL EMERGENCIES—2nd Edition. Stuart C. Cullen, M.D., Professor of Surgery, Chairman, Division of Anesthesiology, and E. G. Gross, M.D., Professor and Head of Department of Pharmacology, both from State University of Iowa College of Medicine. The Year Book Publishers, Inc., Chicago, 1953. 278 pages, \$4.50.

The authors of this Manual, one an anesthesiologist and the other a pharmacologist, have combined their talents to again present the problem of medical emergencies in a concise and readable manner. The important additions in the second edition are concerned with bringing up to date the management of artificial respiration; and the presentation of the ever-present problem of cardiac arrest. It is recommended that the Manual repose on the physician's library table only long enough to permit a complete reading, thereafter to be carried in the emergency bag.

DICTIONARY OF PSYCHIATRY AND PSYCHOLOGY—An Illustrated Condensed Encyclopedia of Psychiatry, Neurology and Psychology. William H. Kupper, M.D., With a Foreword by Douglas M. Kelley, M.D., Professor of Criminology, University of California. The Colt Press, Lackawanna Plaza, Paterson 3, N. J., 1953. 194 pages, \$4.50.

This is a condensed dictionary-encyclopedia and reference work of 194 pages. One is concerned, therefore, with two points—the selection of the material which is given and the accuracy of the definitions given. The selection of material seems to have been highly individual and too dependent upon some subjective evaluation on the part of the author. There is a large amount of neurological material which might well have been discarded in order to allow more material dealing with psychiatry and psychology to be given.

A great many organizations are listed, some of which do not appear to be psychiatric; as for example, Kabat-Kaiser Institutes. The American Board of Psychiatry and Neurology, the American Institute of Psychoanalysis, and the American Psychiatric Association, are listed, but nowhere does one find reference to the American Psychoanalytic Association, the largest organization of its kind in the country.

There is a long list of psychiatric and psychological journals. There is likewise a list of state hospitals for mental disease. Here one notes that the Boston Psychopathic Hospital, one of the Massachusetts state hospitals, and the Langley Porter Clinic, one of the California state hospitals, are not mentioned, although the Psychiatric Institute and Hospital is listed under the New York state hospitals.

The names of a number of well-known criminals who were examined by psychiatrists are given, sometimes with a brief mention of the salient points of the case, sometimes with merely a reference to books or articles. Names of many well-known scientists, both living and dead, are also given. Sometimes the dates of birth and of death are given, other times they are omitted with no apparent reason for the omission. Some of these names do not seem to belong particularly to psychiatry or psychology. When one looks for the names of living psychiatrists he discovers that the author apparently considers only two living psychiatrists deserving of mention; namely, Karl Augustus Menninger and William Claire Menninger.

In general, the definitions given are reasonably accurate, but exception could be taken to a number.

Looking up the word "murder" one finds a number of books listed, followed by this statement, "Reich points out that the murderer often defecates at the scene of his crime, leaving a sort of *carte de visite odorante*." This is certainly an unusual presentation with no definition and one very questionable bit of material.

If one also looks up the word "orgasm" the following material is given: "Climax of sexual intercourse. See W. Reich: Function of Orgasm. Orgone Press." With all the really worthwhile material on such a subject one wonders why the author mentions only the writings of one who is generally discredited.

This volume is somewhat of a hodgepodge of material, the selection of such material being apparently determined by the author's particular interest rather than any real attempt to give a thorough or adequate covering or to pick what would ordinarily be regarded as the more important, and to leave out the less important. There are a number of definitions which are inaccurate or poorly worded so that the meaning is not clear. On the other hand, it may be said that one will find a number of quite unusual things which would not be found in ordinary volumes of this sort.

ANTISEPTICS, DISINFECTANTS, FUNGICIDES, AND CHEMICAL AND PHYSICAL STERILIZATION. Edited by George F. Reddish, Ph.D., Sc.D. (Hon.), St. Louis College of Pharmacy and Allied Sciences. Lea & Febiger, Philadelphia, 1954. 841 pages, 71 illustrations, \$15.00.

Faced with a volume of something over 800 pages on the subject of discouraging or killing germs—exclusive of the therapeutic antimicrobial agents—this reviewer felt at first daunted by the prospect of a long, dry task. Happily, this proved not to be the case, for although the book cannot be recommended for a cozy evening's reading it turns out to be a remarkably interesting compilation of information and viewpoints assembled by the editor and 30 contributors. The 35 chapters converge upon the general subject of disinfection from various angles, and where overlapping occurs the reader benefits by the different pathways leading into the information which he desires. The subject of disinfection is first discussed in its general and historical aspects, including various methods of testing the efficacy of substances and the nature of bacterial resistance. A number of chapters deal with single substances or groups of substances and their mechanisms of action as well as practical uses. Other chapters approach the subject from the standpoint of particular groups of infectious agents and the methods applicable to them, as for example is the case in Chapter 18 where viricidal agents are dealt with. Still other chapters deal with a particular purpose and how it may be met, as in a chapter dealing with surgical antiseptics, and another with chemical disinfection of surgical instruments. Thus, the chapter on iodine pretty thoroughly goes into the actions and uses of this substance in its various forms, while another chapter which may be mostly concerned with surgical antiseptics includes iodine compounds again, but more pointedly discussed with reference to a particular kind of usefulness. One section of the book deals with chemical and physical sterilization methods including heat, gaseous sterilization, and the use of ionizing radiations. A final chapter takes up pasteurization.

A book of this kind is obviously not intended for the general medical reader. There may be some, however, such as surgeons especially interested in or responsible for problems of antiseptics, who will find clarifying answers to many of their questions here, and certainly the book should be available in every hospital. Aside from this use, it should prove to be a valuable reference book for those concerned with problems of public health and sanitation and for bacteriologists. Needless to say, it will be very helpful also to those concerned with food preservation and with various industrial processes in which microbial life plays a part.

* * *

AUDITORY DISORDERS IN CHILDREN—A Manual for Differential Diagnosis. Helmer R. Myklehurst, Professor of Audiology, Professor of Otolaryngology, Northwestern University. Grune & Stratton, New York, 1954. 367 pages, \$6.00.

The book presents a detailed one-year study of 228 children between the ages of six months and seven years who had been referred to the Children's Center for auditory disorders at the Northwestern University Medical School. Most of them had been diagnosed as deaf and all had very little speech; however, 55 per cent of the patients were found to have normal hearing, the auditory disorders being caused by emotional disturbances, aphasia, or mental deficiencies.

The book is divided into five parts with several chapters in each part. At the close of each chapter is an excellent summary.

The first part deals with the problem in general, i.e., language development in children, and the part played by the medical as well as the lay specialists in assisting in this development.

The second part emphasizes the importance of obtaining a painstaking history and performing careful clinical examination, which with proper interpretation are of utmost value in making a diagnosis.

Part three describes behavior, symptomatology in auditory disorders due to peripheral deafness, aphasia, psychic deafness and mental deficiency.

Part four completely details the examination methods and procedures with the use of tests, the auditory capacity and the psychological examination.

The last part presents case histories, illustrating each condition together with recommended therapy.

The book is well written and gives definite aid to the practitioner in making a diagnosis and treating the various forms of auditory failure.

It is well worth a place in the library of the otolaryngologist, the pediatrician, the neurologist, the psychologist and the educator.

* * *

ANTIBIOTICS—2nd Edition. Robertson Pratt, Ph.D., Professor of Pharmacognosy and Plant Physiology, and Jean Dufrenoy, D.Sci. (Paris), Research Associate in Antibiotics, both from the University of California College of Pharmacy. J. B. Lippincott Company, Philadelphia, 1953. 398 pages, \$7.50.

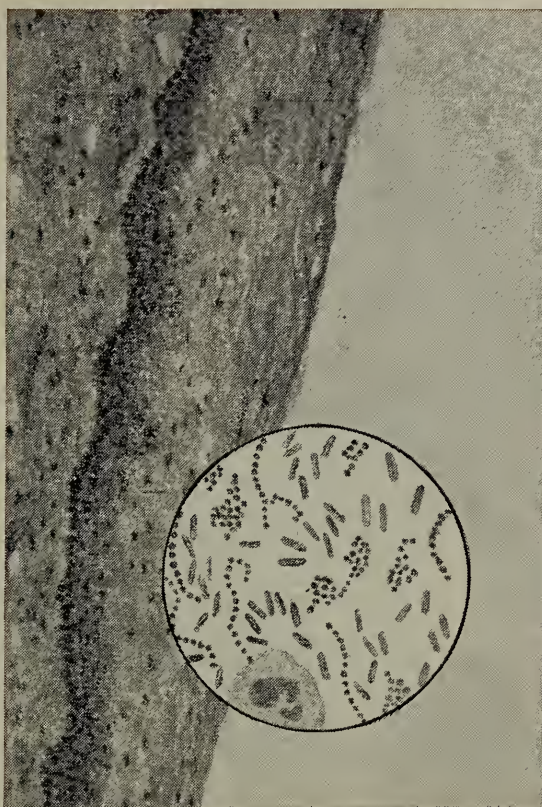
The volume contains considerable information of real interest to every student of antibiotics which is not available in treatises with a more clinical flavor. The industrial, agricultural, veterinary and broader economic aspects are featured. Neither author is a physician, hence they have wisely minimized clinical discussions. However, it would have been better if medical problems had not been discussed at all because some therapeutic methods described were abandoned long ago. The bibliographies are not designed to be comprehensive but do not accomplish the stated aim of providing a key to the literature, at least in the field of medical therapy. The book is recommended as a source of interesting background material concerning laboratory and industrial aspects of antibiotics but it is not recommended as a guide to the physician or medical student.

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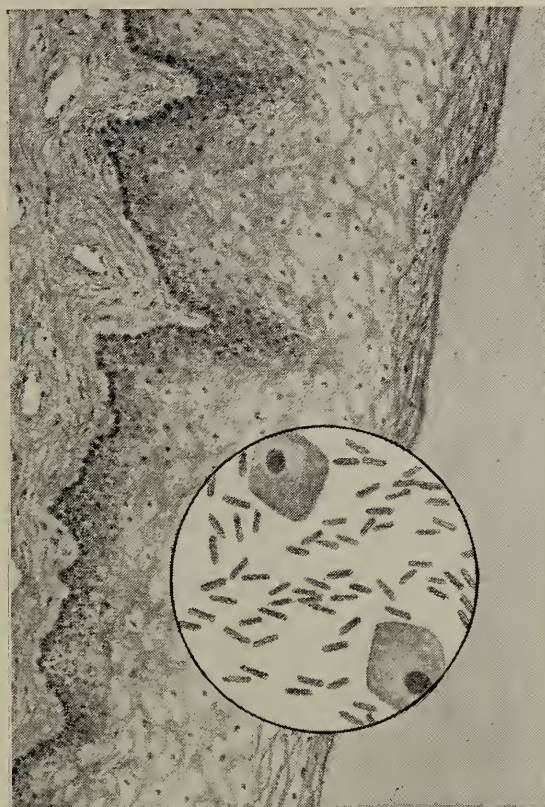
DISORDERS OF THE BLOOD—Diagnosis, Pathology, Treatment, Technique—7th Ed. Sir Lionel E. H. Whitby, C.V.O., M.C., M.A., M.D. (Cantab.), F.R.C.B. (Lond.), D.P.H., Regius Professor of Physics in the University of Cambridge; and C. J. C. Britton, M.D. (New Zealand), D.P.H., Physician and Hematologist to the Prince of Wales Hospital. 856 pages, \$9.50.

This volume has undergone seven editions since it was first published in 1935 and is now brought up to date to the middle of 1953. The chapter on the hemorrhagic diseases is excellent with a section even on the recently described Christmas disease (PTC deficiency) and methods for the differentiation of hemophilia from the hemophiloid disorders. Discussions of newer chemotherapeutic agents such as the steroids, TEM and Myleran are included but 6-mercaptopurine is not mentioned. The various hemoglobins are considered but a typographical error might be responsible for the statement that it seems *likely* that hemoglobin C is the abnormal hemoglobin which causes Mediterranean anemia.

This is primarily a reference volume but is concise and readable in the manner peculiar to much of the British medical literature. This book presents current British hematologic thought and is one of the best hematologic texts available. It is recommended for the medical student as well as the practitioner and specialist interested in the field of hematology.



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Post Office Urges More Careful Blood Packaging

An assistant postmaster in Chicago recently telephoned the American Medical Association's office and complained that many doctors are mailing blood specimens in glass vials placed in metal screw-topped cardboard tubes to private and governmental laboratories and, because of carelessness in screwing the tops on securely, the vials slip from the tubes, are broken, and the blood stains other mail. He pointed

out one important fact from the doctor's viewpoint; if the postal employee reinserts the vials in the tubes, who knows whose blood goes into whose tube?

The assistant postmaster said the same trouble exists in other postal centers and urged us to publicize what he called "this dangerous nuisance."

He urged doctors to place an adhesive strip (not Scotch tape) across the metal top and down the sides of the container. This, he said, will prevent the insecurely screwed tops from coming off.

—The A.M.A. Secretary's Letter

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Bats May Be Source of Rabies

Insect-eating bats may be a hitherto unrecognized rabies reservoir, it was reported in a recent issue of the *Journal of the American Medical Association*.

Reports of two human beings being attacked by rabid insectivorous bats have been made during the last year, according to Dr. Robert H. Kough, Boiling Springs, Pa. One victim was a seven-year-old boy from a remote section of Hillsborough County, Fla., and the other a 34-year-old Pennsylvania woman.

Dr. Kough described in detail the bat's biting the woman on the left arm in September 1953. The bat was trapped, and laboratory tests showed it was in-

fected with rabies. The victim received antirabies treatment and at the time the article was written, she showed no symptoms of the disease.

"The occurrence of rabies in a fairly common species of bat suggests that the bat population be sampled in various portions of the United States to determine if a significant rabies reservoir exists," Dr. Kough wrote.

"The nearly simultaneous occurrence of rabies in bats collected from Pennsylvania and Florida indicates that a hitherto unrecognized rabies reservoir may exist in the eastern portion of the United States."



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Of the 22,296 physicians in the age group 65-74 in the United States as of April 1950, 18,770 or 84.2 per cent were in active private practice, according to data contained in a new bulletin released by the Bureau of Medical Economic Research of the American Medical Association.

Commenting on the figure, the *Journal of the American Medical Association* said editorially in a recent issue:

"Only 15.8 per cent were not engaged in active

private practice. Among these 3,526 not in active private practice were housewives and others who had practiced for only a few years, if any, and several hundred who were still employed by private or public employers; still others had retired from private or public employment, probably on a pension financed in whole or in part by the employer. . . .

"If the pattern of 1950 is continued, eight or nine physicians out of 10 would be required to pay social security taxes but would receive no pension from age 65 to 75."

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*Lawler, E. G. et al.: Clin. Med. 61:207 (March) 1954.

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Polio Infection of Fetus Prior to Delivery Reported

The first known poliomyelitis infection of a fetus prior to delivery was reported in a recent issue of the *Journal of the American Medical Association*.

Three physicians in describing the case said a 24-year-old pregnant woman entered a Milwaukee hospital with polio, and the following day a spontaneous abortion occurred. Laboratory examination of the fetus, they said, found it was infected with polio virus.

Polio is uncommon before one year of age and the youngest on record previously was only two days old.

"To our knowledge this is the first report of the demonstration of polio virus in both the placenta and fetus infected during pregnancy," the doctors said.

Reporting the case were Drs. Max J. Fox of the Department of Internal Medicine, Marquette University School of Medicine, Milwaukee, and Morris Schaeffer and Chen P. Li, both of the U. S. Public Health Service Communicable Disease Center, Montgomery, Ala.

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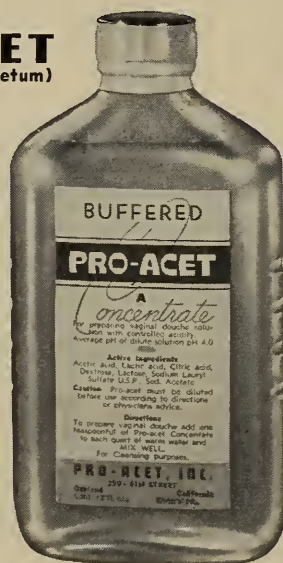
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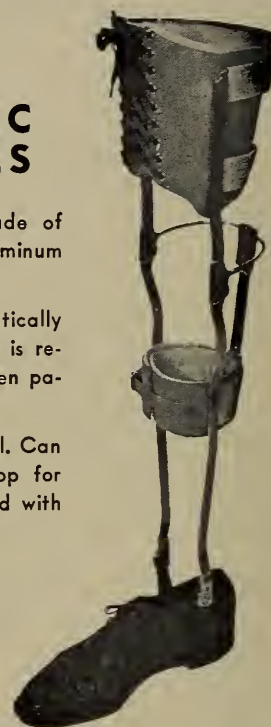


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References: Levin, S. J.: Ann. Allergy 11: 157, 1953., Gay, L. N., and Murgatroyd, G. W. Jr.: J. Michigan M. Soc. 53: 33, 1954.



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Film on Alcoholism Added to AMA Motion Picture Library

Case studies of three types of alcoholics tracing the development of the disorder from origin are incorporated in a motion picture film which recently was added to the American Medical Association's motion picture library. Entitled "Alcoholism," this film attempts to show how the roots of this illness are imbedded personality difficulties often relating back to the formative years of the victim's childhood and how it can be treated through psychology. This black and white, sound, 22-minute film may be ob-

tained from the Committee on Medical Motion Pictures for a service charge of two dollars.

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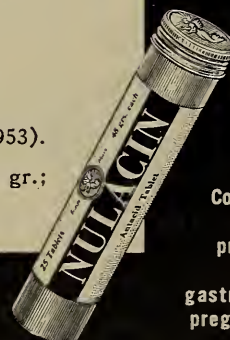
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*Steigmann, F., and Goldberg, E., J. Lab. & Clin. Med. 42:955 (1953).

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Leading Causes of Deafness in Children

Much has been learned in the last few years about permanent deafness in young children, with a resultant change in the believed causes of such deafness, according to Drs. Edmund P. Fowler and Milos Basek, New York.

Writing in a recent issue of the *Archives of Otolaryngology*, published by the American Medical Association, the doctors described a study of 270 deaf children under the age of 10 years; in all but two cases deafness began before the child was five years of age. The report showed that in 81 cases deafness was caused by prenatal conditions and that in 189 cases it resulted from postnatal conditions.

Among the 81 cases of prenatally caused deafness, 10 resulted from such conditions as hereditary deafness and syphilis. Fifty children became deaf as a result of conditions which occurred during pregnancy. These included German measles, Rh blood factors, emotional causes (excessive vomiting), use of abortives, and convulsions. Deafness occurred from the effects of labor in 21 cases; these included

infections, birth injury, excessive use of drugs, and cyanosis after birth.

Postnatal deafness occurred in 45 children following inflammation of the middle ear. Thirty-nine children became deaf following high fever and such infectious diseases as meningitis, mumps and measles. Drugs and poisoning caused deafness in eight cases and 11 children developed deafness following such conditions as a fractured skull, Ménière's disease, leukemia, and cerebral degeneration. In 86 cases, the exact cause of deafness was unknown.

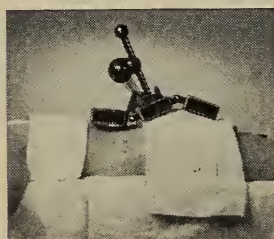
"A look through the older literature on the etiology of deafness makes it obvious that a great deal has been learned in the last few years concerning loss of hearing in young children," the doctors wrote. "The causes of deafness have apparently changed, so that they are no longer dominated by septic meningitis and scarlet fever in the acquired list.

"Furthermore, the old 'scrapbasket' called 'congenital deafness' has been cast away, to be replaced by the modern theories of malformation and congenital anomalies."

The doctors are associated with the Babies Hospital of the Columbia-Presbyterian Medical Center.

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(Continued from Page 60)

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SITUATIONS WANTED—(a) Orthopedist; year's residency, general surgery; three-year surgical residency, three-year residency orthopedic surgery, teaching hospital; Part I completed. (b) Otolaryngologist; Board eligible; two years, assistant, private practice. (c) General Surgeon qualified thoracic surgery; Diplomate (General Surgery); Part I Thoracic Board completed. (d) Dermatologist; three years' association Board dermatologist; (e) Neuropsychiatrist; Diplomate; eight years, chief, neurological service, teaching hospital. (f) Pediatrician; pediatric training, university group; recently received discharge. (g) Urologist, Diplomate; six years, chief department, urology and urologic surgery, large general hospital and clinic. (h) Neurosurgeon; training recently completed at teaching center; Board eligible. (i) Surgeon; M.D., Harvard; Diplomate, American Board; available immediately. For further information, please write Burnice Larson, Medical Bureau, Palmolive Building, Chicago, Illinois.

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RADIOLOGIST, young, certified, military category IV, married. Trained large center in South. Desires hospital practice or association. Vacationing through California in July. Available August. Box 90,795, California Medicine.

(Continued on Page 84)

Surgery Now Safe for Diabetics

Surgery has become as safe for the diabetic as for the nondiabetic, Dr. Charles R. Shuman, Temple University Hospital and School of Medicine, Philadelphia, stated recently.

Dr. Shuman reported on a three-year study of 340 patients in a recent issue of the *Journal of the American Medical Association*.

These patients underwent 373 operations while under the supervision of the Temple University Hospital diabetic service. There were no deaths directly resulting from diabetes or its treatment, Dr. Shuman said.

"The number of diabetics who receive surgical treatment has steadily increased during the past three decades since the discovery of insulin and will continue to increase in future years.

"The diabetic patient is considered a safe subject for any type of surgery when modern methods of anesthesia, fluid and electrolyte replacement, antibiotic therapy and control of metabolism and nutrition are used," he said.

Although heart disease and infection increase the risk during surgery and most of the patients studied suffered these complications, only nine patients died in the postoperative period, Dr. Shuman related.

Although six patients suffered from uremia, a serious complication, four of them made successful recoveries, he said.

Complications of diabetes were more frequent in this study because most of the patients were over 45 years old, Dr. Shuman pointed out.

"The mortality and morbidity aspects of surgery in diabetics are more closely related to the disease necessitating surgery, the vascular complications of diabetes, and infections than to the diabetes itself," he said.

Proper management of infections with antibiotics, and of heart ailments with drugs has "somewhat reduced" the importance of these factors, according to Dr. Shuman.

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references: 1. Boland, E. W., and Headley, N. E.: J.A.M.A. 148:981, March 22, 1952.
2. Schwartz, E.: J. Allergy 25:112-119, March, 1954.



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Contagious Diseases in Children Reach Peak at Five Years

Children are more likely to get contagious diseases at about five years old than any other time, a study of 200 New York City children shows.

However, they experience upper respiratory infections at an even rate from birth to 12 years, Dr. Nathan Epstein said in a recent issue of the *American Journal of Diseases of Children*, published by the American Medical Association.

He based his conclusions on a 12-year study of children from 125 New York families. They were checked for an average of six years each in the Department of Pediatrics of the New York Hospital-Cornell Medical Center.

The study shows that from birth to 10 years a child has about one out of five chances of being free from upper respiratory infections during any year. Between 10 and 12 the chance is one in three.

"The incidence of contagious diseases reaches a peak at the beginning of the school age (5 to 7 years)," Dr. Epstein said.

One of four children suffered a contagious disease in any one year, including measles, German measles, whooping cough or chickenpox.

"The incidence of mild upper respiratory infections appears to be remarkably constant in childhood," Dr. Epstein said. "Two of three children ex-

perienced one or more mild upper respiratory infections during any year. One out of four children had one or more severe upper respiratory infections during any year."

The children studied averaged one or two mild and one severe infection a year, regardless of age. Less than five per cent suffered more than two a year.

Dr. Epstein said he found no significant difference in the incidence or frequency of upper respiratory infections among children potentially susceptible to rheumatic fever and those not susceptible. Respiratory infections have long been implicated in the history of rheumatic fever, he said, but it is "not clear" whether the rheumatic susceptible child (who has had rheumatic fever) is more prone to such infections.

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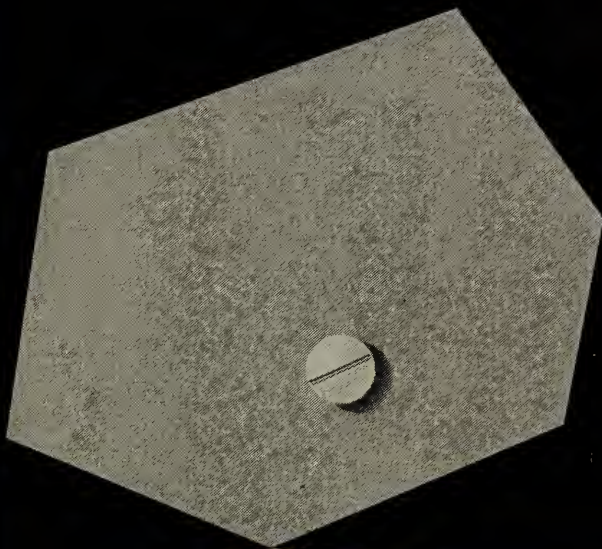
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1. Abramson, Julius, Bresnick, Elliott, and Sapienza, P. L.:
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(County society secretaries are requested to notify California Medicine promptly when changes are indicated in their roster information.)

Alameda-Contra Costa Medical Assn., 6230 Claremont Avenue, Oakland 18. Meets Third Monday, 8:15 p.m., Hunter Hall, Oakland.
Pres., James B. Graeser, 298 Grand Ave., Oakland.
Secy., Bernard B. Gadwood, 2815 MacDonald Ave., Richmond.

Butte-Glenn Medical Society. Meets Fourth Thursday.
Pres., Thomas Elmendorf, Masonic Bldg., Wil-
lows.
Secy., Karl J. Chiappella, 184 E. 5th St., Chico.

Fresno County Medical Society, 616 Security Bank Building, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside Country Club.
Pres., Fred E. Cooley, 4313 E. Tulare St., Fresno.
Secy., J. Cooper Collins, 2920 Fresno St., Fresno.

Humboldt County Medical Society. Meets First Thursday.
Pres., Clarence Crane, Jr., 492 Main St., Ferndale.
Secy., Ted W. Loring, 715 I St., Eureka.

Imperial County Medical Society. Meets Second Tuesday, 8 p.m., Pioneer Memorial Hospital, Brawley.
Pres., Sidney M. Tepper, 136 N. 5th St., El Centro.
Secy., Ernest Brock, 200 S. Imperial Ave., Imperial.

Inyo-Mono County Medical Society. Meets Fourth Tuesday except December, January, February.
Pres., Victor H. Hough, Lone Pine.
Secy., Robert W. Denton, 611 W. Line, Bishop.

Kern County Medical Society, 1300 Chester Avenue, Bakersfield. Meets Third Tuesday, 7:30 p.m., Stockdale Country Club except June, July, August.
Pres., L. N. Osell, 2011 18th St., Bakersfield.
Secy., R. W. Burnett, 515 Truxtun Ave., Bakersfield.

Kings County Medical Society. Meets Second Monday, 8:00 p.m., Legion Hall, Hanford.
Pres., Lloyd Christensen, Van Sicklen Bldg., Hanford.
Secy., N. F. Sorensen, Van Sicklen Bldg., Hanford.

Lassen-Plumas-Modoc County Medical Society. Meets on call.
Pres., R. M. Peters, Portola.
Secy., Charles W. Brown, Western Pacific Hospital, Portola.

Los Angeles County Medical Assn., 1925 Wilshire Blvd., Los Angeles 57. Meets First and Third Thursdays, 1925 Wilshire Blvd., Los Angeles.
Pres., J. Philip Sampson, 2200 Santa Monica Blvd., Santa Monica.
Secy., Ewing L. Turner, 1930 Wilshire Blvd., Los Angeles 57.

Madera County Medical Society.
Pres., Omar U. Need, 117 S. 8 St., Madera.
Secy., Gordon C. Hall, 501 E. Yosemite, Madera.

Marin County Medical Society. Meets Meadow Club of Tamalpais, Fourth Thursday of every month, 7:00 p.m.
Pres., Leo L. Stanley, 1322 5th Ave., San Rafael.
Secy., Wm. Burgett Smith, 711 D St., San Rafael.

Mendocino-Lake County Medical Society.
Pres., Olga A. Miller, Box X, Talmage.
Secy., Martin S. Barnes, 615 Main, Fort Bragg.

Merced County Medical Society. Meets Fourth Thursday, Hotel Tioga, Merced.
Pres., William Fountain, Shaffer Bldg., Merced.
Secy., John East, 652 W. 20th Street, Merced.

Monterey County Medical Society. Meets First Thursday.
Pres., A. C. Mitchell, 576 Hartnell, Monterey.
Secy., Clyn Smith, Jr., Cass and Carmelita, Monterey.

Napa County Medical Society. Meets Second Wednesday.
Pres., Harold E. James, Sanitarium, Calif.
Secy., Merle F. Godfrey, 1519 Jefferson, Napa.

Orange County Medical Association, 1226 N. Broadway, Santa Ana. Meets First Tuesday, 7:00 p.m.
Pres., A. Norton Donaldson, 1330 N. Main St., Santa Ana.
Secy., Chad M. Harwood, 1202 N. Broadway, Santa Ana.

Placer-Nevada-Sierra County Medical Society. Meets every second Wednesday of each month.
Pres., John R. Topic, 1166 High St., Auburn.
Secy., T. J. Rossitto, 1166 High St., Auburn.

Riverside County Medical Association, 4241 Market Street, Riverside. Meets Second Monday, 8:00 p.m., El Loro Room, Mission Inn.
Pres., Van R. Hamilton, 6876 Magnolia, Riverside.
Secy., Vean M. Stone, 3616 Main St., Riverside.

Sacramento Society for Medical Improvement, 2731 Capitol Ave., Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.
Pres., A. E. Berman, 2901 Capitol Ave., Sacramento.
Secy., Frank G. Schiro, 815 30th St., Sacramento.

San Benito County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.
Pres., E. C. Sheldon, 956 San Benito St., Hollister.
Secy., Peter Jones, Bank of America Bldg., Hollister.

San Bernardino County Medical Society. Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.
Pres., Leonard M. Taylor, 3549 Valencia Ave., San Bernardino.
Secy., Carl M. Hadley, 315 Platt Bldg., San Bernardino.

San Diego County Medical Society, 101 Medical-Dental Bldg., San Diego 1. Meets Second Tuesday, Manor Hotel.
Pres., Howard A. Ball, 307 Medico-Dental Bldg., 233 A St., San Diego 1.
Secy., Maurice J. Brown, 2001 Fourth Ave., San Diego 1.

San Francisco Medical Society, 2180 Washington St., San Francisco 9. Meets Second Tuesday, 8:15 p.m., 2180 Washington St., San Francisco 9.
Pres., Samuel R. Sherman, 2107 Van Ness Ave., San Francisco.
Secy., Matthew N. Hosmer, 384 Post St., San Francisco.

San Joaquin County Medical Society. Meets First Thursday, 8:15 p.m., 936 N. Commerce St., Stockton.
Pres., James Baker, 845 N. California St., Stockton 3.
Secy., F. A. McGuire, 307 Medico-Dental Bldg., Stockton.

San Luis Obispo County Medical Society. Meets Third Saturday, 7:00 p.m., Golden Dragon Cafe, San Luis Obispo.
Pres., Ernest Werbel, 1170 Marsh St., San Luis Obispo.
Secy., Tibor Beresky, 1304 Garden St., San Luis Obispo.

San Mateo County Medical Society, 122 Second Ave., San Mateo. Meets Third Tuesday of each month.

Pres., Bradley C. Brownson, 23 Baldwin Ave., San Mateo.
Secy., Norman C. Fox, 512 Jenevein Ave., San Bruno.

Santa Barbara County Medical Society, 300 West Pueblo St., Santa Barbara. Meets Second Monday, Cottage Hospital.
Pres., Laurence E. Heiges, 202 E. Cypress, Lompoc.
Secy., Arthur E. Wentz, 300 W. Pueblo, Santa Barbara.

Santa Clara County Medical Society, 1024 The Alameda, San Jose 26. Meets Third Monday of every month.
Pres., Burt L. Davis, 261 Hamilton Ave., Palo Alto.
Secy., Dan Brodovsky, St. Claire Bldg., San Jose.

Santa Cruz County Medical Society. Meets every Second month, Second Tuesday. Time, place to be announced.
Pres., D. S. Sedgwick, Capitola.
Secy., Samuel B. Randall, 230 Walnut Ave., Santa Cruz.

Shasta County Medical Society. Meets First Monday.
Pres., H. Harper Thorpe, 1529 Market St., Redding.
Secy., Roy W. Thomas, 1555 Court St., Redding.

Siskiyou County Medical Society. Meets Sunday on call.
Pres., Albert A. Newton, 807 S. Main, Yreka.
Secy., Victor J. Thompson, Weed Hospital, Weed.

Solano County Medical Society. Meets Second Tuesday, 8:00 p.m., Casa de Vallejo Hotel, Vallejo.
Pres., Herbert L. Joseph, 607 Carolina, Vallejo.
Secy., Robert L. Garrett, 327 Georgia, Vallejo.

Sonoma County Medical Society, 300 American Trust Bldg., Santa Rosa. Meets Second Thursday.
Pres., William J. Rudee, 1049 Fourth St., Santa Rosa.
Secy., Frank E. Lones, 300 American Trust Bldg., Santa Rosa.

Stanislaus County Medical Society. Meets Third Thursday, 7 p.m., Hotel Hughson, Modesto.
Pres., Howard F. Nachtman, 222 McHenry Ave., Modesto.
Secy., J. Lyle Spelmann, 140 McHenry Ave., Modesto.

Tehama County Medical Society. Meets at call of President.
Pres., O. T. Wood, Red Bluff.
Secy., J. W. Ingle, Corning.

Tulare County Medical Society.
Pres., Vincent M. Dungan, 217 S. Willis St., Visalia.
Secy., James J. McNearney, 140 N. M St., Tulare.

Ventura County Medical Society. Meets Second Tuesday, 7:15 p.m., Colonial House, Oxnard.
Pres., James H. Nelson, 326 Topa Topa Dr., Ojai.
Secy., Franklin K. Helbling, 34 N. Ash St., Ventura.

Yolo County Medical Society. Meets First Wednesday.
Pres., John A. Saltsman, 312 Elizabeth St., Vacaville.
Secy., William T. Robinson, Woodland Clinic, Woodland.

Yuba-Sutter-Colusa County Medical Society. Meets Second Tuesday.
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**More Cancer Could Be Cured
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The present 10 per cent rate of cure for cancer could be increased to 25 even without any new discoveries, a cancer specialist reports.

Whether it is increased is "squarely up to you and me" and "how well we act on what we learn," Dr. George E. Wakerlin, Chicago, said in a recent issue of *Today's Health* magazine, published by the American Medical Association.

An estimated 25,000 cancers are cured each year in this country—an average of 10 per cent with extremes of 85 for skin cancer and less than 1 per cent for blood cancer.

"With the full application of present knowledge we could cure 25 per cent, with extremes of 98 per cent for skin cancer and 1 per cent for cancer of the blood," he said. "The difference between 10 and 25 per cent indicates the size of the educational problem facing the American people."

Dr. Wakerlin is head of the department of physiology at the University of Illinois College of Medicine and a member of the American Cancer Society Executive Committee.

In an article, "Recent Progress in Cancer Research," he said the remaining 75 per cent uncured cancers "will yield only to present and future cancer research."

Although scientists do not know what basic change makes a normal cell become cancerous, they know "more about the mechanisms of cancer than about a number of other diseases," he said.

Some factors that play a role are heredity, aging, cancer-producing substances, radiation, viruses, hormones and nutrition.

New discoveries continually are being made about these factors, such as recent studies of South African natives showing a link between cancer of the liver and "long-standing dietary deficiencies," he said.

Important progress also is being made in diagnostic methods, including x-rays, the viewing of internal organs with instruments, and techniques for obtaining internal tissue specimens.

"A blood test for cancer, particularly early cancer, would be invaluable since it would enable mass surveys for cancer," he said.

Although none of the many tests reported in the last ten years has been specific enough, a recent discovery about changes in the amount of certain "enzyme antagonists" in the blood as a result of cancer may "some day" result in a successful blood test, he said.

He warns against overoptimism about new and "inadequately proved" remedies, pointing out that cancer cures still are achieved largely by surgery, x-ray and/or radium.

These methods also are being improved. Successful surgery now can be far more extensive than be-

(Continued on Page 16)

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More Cancer Could Be Cured Without New Discoveries

(Continued from Page 10)

fore. A radiation machine containing large quantities of radioactive cobalt is now being tested.

A more significant advance is in the use of sex hormones which has brought "considerable improvement" and prolonged many lives.

None of the other anticancer agents proposed recently has been "generally accepted" by cancer experts, and Dr. Wakerlin said relying on them should be guarded against.

"Otherwise false hopes are raised, and patients with operable cancers may postpone surgery or radiation until it is too late," he said.

"The complete conquest of cancer is a two-faceted problem," he said. "First, research workers must find ways and means of controlling, curing and preventing the disease; and then each of us, with the help of our family doctors and a variety of specialists, must take advantage of the hard-won knowledge.

"The cumulative effect of many research projects makes it likely that our knowledge of how to control cancer will grow at an accelerating pace."

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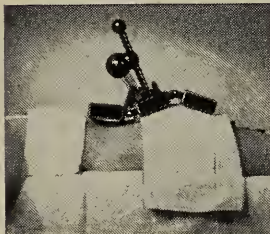
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Nervous Stress Should Be Ended Quickly

That familiar urge to "get away from it all" should be succumbed to when it is a sign of stress, an editorial in a recent issue of the *Journal of the American Medical Association* stated.

The editorial said stress implies "an inner conflict or a conflict against circumstances for which no immediate action is appropriate.

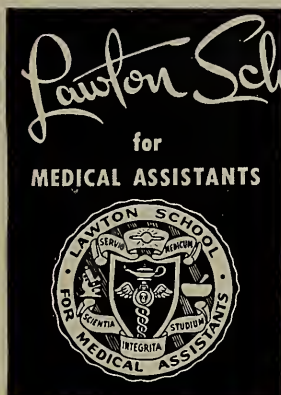
"As with other conditions, prevention, when possible, is better than cure," it said. "Removal of the cause is still the best treatment. After that, rest, a change of scene, and a change of interest are the most effective therapeutic measures."

Continued stress may result in such diseases as duodenal ulcer, malignant hypertension and rheumatoid arthritis. It may play an important role in nervous fatigue, infection and intoxication.

The editorial reported on a study of combat stress during World War II and the Korean conflict. It showed that men who had been under almost constant artillery bombardment for five days with only 7 per cent casualties were far worse off than those who had withstood 18 hours of intense fighting in which the unit suffered 70 per cent casualties.

The study also showed an enormous difference in

(Continued on Page 30)



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Industrial Solvent May Cause Bone Marrow Damage

Habitual exposure to carbon tetrachloride—a widely-used industrial solvent—may cause “irreversible” damage to the red blood cell-producing bone marrow, a New York City physician has said.

Dr. Bernard Straus, of the Bronx Veterans Administration Hospital, reported in a recent issue of the *Journal of the American Medical Association* on three fatal cases of aplastic anemia following chronic exposure to the chemical.

Most reported cases of carbon tetrachloride poisoning have resulted from acute exposure, he said. In the three cases he reported, exposure had been over long periods.

One of the men had been working for six and a half months with sponges soaked in carbon tetrachloride in a small room ventilated only by a door. Another spent most of three years in military service cleaning gun parts with kerosene and carbon tetrachloride in a small shack. The third had used the substance for cleaning tools and upholstery in the garage where he worked.

Dr. Straus said an important fact is that carbon tetrachloride has a “cumulative effect” and that failure of the bone marrow to function may become obvious only after a long series of “minor insults” by the chemical.

“The importance of avoiding exposure is obvious,” he said.

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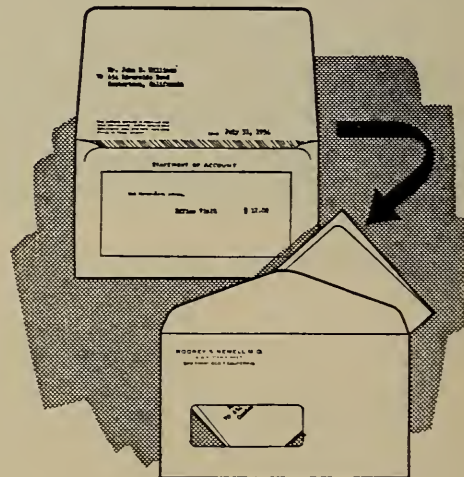
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Nervous Stress Should Be Ended Quickly

(Continued from Page 17)

individual reaction to stress. It appears that some persons have the ability to withstand much more stress without breaking down.

But the editorial warned that "no one is immune from breakdown if the stress is severe enough and sufficiently prolonged."

"Low Salt" Food Products

"Low salt" food products must declare their sodium content per average serving per 100 grams of food, the Food and Drug Administration recently ruled. The new regulations, to become effective September 29, were recommended by the A.M.A. Council on Foods and Nutrition and the American Heart Association.

—A.M.A. Washington Letter

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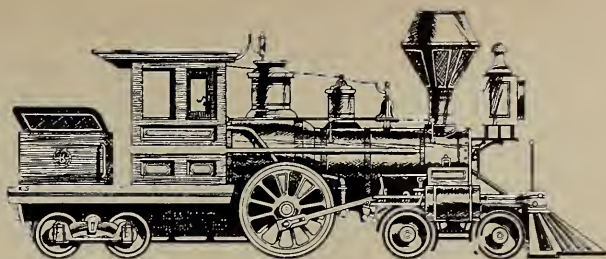
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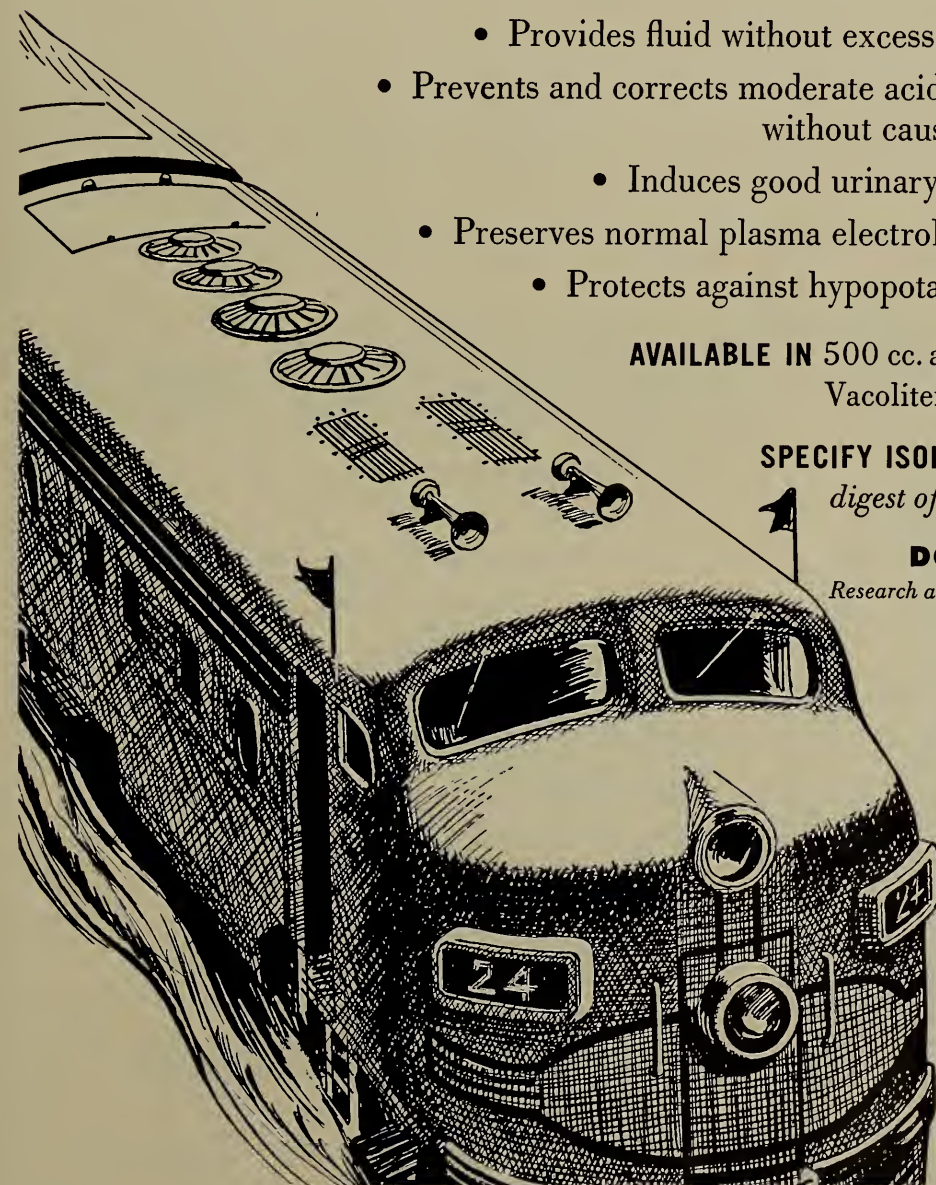
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Thumb Position Indicates Source of Paralysis

The opposability of the thumb, one of the unique features that distinguishes man from the animals, also may be an important clue in diagnosing brain paralyse.

A Philadelphia psychiatrist and neurosurgeon reports that some cases can be tentatively diagnosed almost as soon as the patients walk into the office—just by looking at their thumbs.

Dr. Temple Fay describes his simple thumb tests in a recent issue of the *Journal of the American Medical Association*.

Since specific parts of the brain control specific muscles and movements, an abnormal position of the thumb in relation to the fingers as well as to the hand and wrist during walking is characteristic of types of paralysis, he said.

"Procedures that tend toward more definite localization of a lesion often lead to a more specific diagnosis and consequent appropriate and specialized treatment," he said.

The thumb tests, roughly, can separate patients who have disturbances of the spinal cord, the cerebellum, which controls movement coordination, or

the nervous structure. Tentative diagnoses can be made quickly for such disorders as encephalitis, multiple sclerosis, meningitis or arteriosclerosis.

For example, an inflammation of the spinal cord such as poliomyelitis may enable a patient to place the tip of the thumb completely back of the knuckle of the index finger. "Double jointed" persons can almost do this, but not without force.

A thumb drawn into the palm of the hand may indicate spastic paralysis. Patients with central brain conditions such as shaking palsy or Parkinson's disease cannot repeatedly and rapidly touch the tip of the thumb to the tip of the index or middle finger.

With multiple sclerosis or defects of the part of the brain which controls movement coordination, the patient, with eyes closed, cannot touch the thumb to the tip of the nose.

However, Dr. Fay notes that this test may not work:

"This procedure has often been too well practiced (by some patients in childhood for other purposes) and the index finger may be required as a substitute."

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Electrical Stimulation Of Nerve Aids Breathing

Electrical stimulation of a nerve which controls breathing is a valuable technique in treating certain types of respiratory failure, including that caused by poliomyelitis, according to Dr. John C. Macaulay, Albany, N. Y.

Writing in a recent issue of the *Journal of the American Medical Association*, Dr. Macaulay described two cases of breathing difficulty associated with acute bulbar polio in which electrical stimulation of the phrenic nerve aided in the correction of the condition and in the patients' recovery. The patients were children, three and five years of age.

The electrical stimulation is supplied by an electrophrenic respirator, a portable electronic device capable of sending out intermittent electrical current. The electrode from the stimulator is placed on the skin over the motor point of the phrenic nerve in the neck or surgically applied directly on the nerve. By regulating the cycle rate and the voltage, complete control of the rate and depth of respiration can be obtained.

In one case reported by Dr. Macaulay, skin stimulation of the nerve failed to alleviate abnormal breathing, necessitating an electrode being surgically applied directly on the nerve; therapy continued for

a period of as long as 17 hours. In the second case skin stimulation of the phrenic nerve was sufficient to cause resumption of normal breathing.

"The mortality rate is highest in the bulbar form of poliomyelitis; yet even desperately ill patients, if they can be kept alive through the crucial period of central involvement (24-28 hours), show little or no residual effect of their disease," he stated.

"It is apparent, therefore, that judicious management will not only result in saving the patient's life, but also leave him in much better condition than a patient with a correspondingly severe case of the spinal form of poliomyelitis.

"The electrophrenic respirator appears to be a most useful adjuvant for this purpose."

Dr. Macaulay is associated with the department of pediatrics, Albany Hospital and Albany Medical College, Union University.

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Nylon, Waterless Cleaners May Cause Skin Trouble

Nylon fabrics and waterless hand cleaners can cause or contribute to skin diseases of the hands and feet.

Reports on the two substances were made by Dr. George E. Morris, Boston, in a recent issue of *Archives of Hygiene and Occupational Medicine* and by Dr. Robert G. Carney, Iowa City, Iowa, in a recent issue of *Archives of Dermatology and Syphilology*. Both are published by the American Medical Association.

Dr. Morris said many waterless hand cleaners, which are used widely in industrial plants, are based on cold cream, soap, or synthetic detergents. However, the only waterless cleaner of any value to the "really dirty worker" is one based on such solvents as kerosene or benzine.

These solvents are "especially hazardous" since they sensitize and irritate at the same time. He said such cleaners are not only dangerous but are only "an expensive method of using kerosene as a skin cleaner."

Dr. Morris reported on nine cases of hand skin disease caused by using such hand cleaners.

Dr. Carney stated that nylon fabrics may be an important factor in producing and prolonging skin diseases, particularly in persons with foot diseases involving the circulation.

"This appears to be due to the lack of absorbency of nylon and suggests the possibility that nylon fabrics may promote or contribute to other disorders in which sweating and moisture are factors," he said.

He described cases in which such foot diseases were aggravated whenever the patients wore nylon hose and alleviated when they changed to silk or cotton.



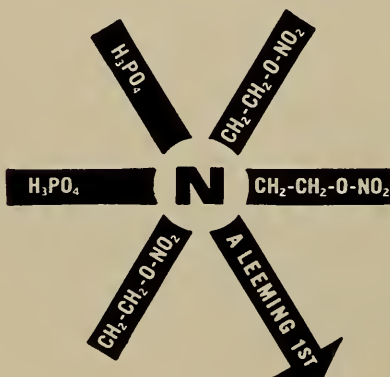
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Heartburn May Mask Serious Illness

A touch of heartburn which can be "fixed up fine" with bicarbonate of soda can be a mask for serious disorders such as ulcers, stomach cancer or heart disease, two New York physicians warned.

M. Bernard Brahdly, M.D., Mount Vernon, N. Y., and Harold Gluck, Ph.D., New York City, gave this advice in a recent issue of *Today's Health* magazine, published by the American Medical Association.

Heartburn is the term generally used to describe a sensation of pressure, fullness or "burning" in the pit of the stomach or near the heart. As one man put it, "I feel just like my gullet is on fire."

The feeling usually comes about 10 or 15 minutes after eating but may occur on an empty stomach.

It is not always ominous—it may be the result of excessive smoking or too much "morning after the night before." Its cause may be nervous and involve simply an increase in one of the digestive acids. Bicarbonate of soda and other "home remedies" will relieve this kind of heartburn.

But heartburn also can come from organic disorders. Chronic gallbladder disease interrupts the digestion of fats and can cause gas and heartburn. So can appendicitis. Cancer of the stomach eats away the lining of the stomach and invades the muscle wall.

"Obviously bicarbonate of soda and its second and third cousins will not cure the heartburn caused by cancer," they said.

The two physicians said a patient frequently is rushed to a hospital in a critical condition, and the family explains he had "a little heartburn but bicarbonate of soda fixed him up fine."

"Bicarbonate of soda fixed him up so well that it masked angina pectoris—a symptom of one of the most important causes of sudden death," the physicians said.

Angina pectoris is characterized by a sense of oppression around the heart and a severe stabbing pain which often extends to the left arm and back between the shoulder blades. The patient brushes aside the symptoms as heartburn. Sudden death often follows.

Bicarbonate of soda and other antacids "can only camouflage the trouble, while the underlying cause goes on unchecked," they said. "To treat one symptom of a disease is as fruitless as trying to treat the leaves on a plant when the roots are dying. Only a physician can get at the root of the trouble and advise the proper plan of treatment."

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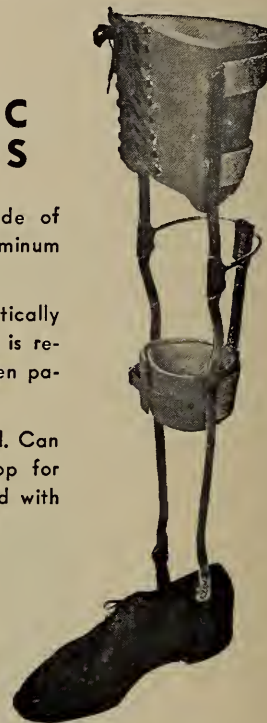
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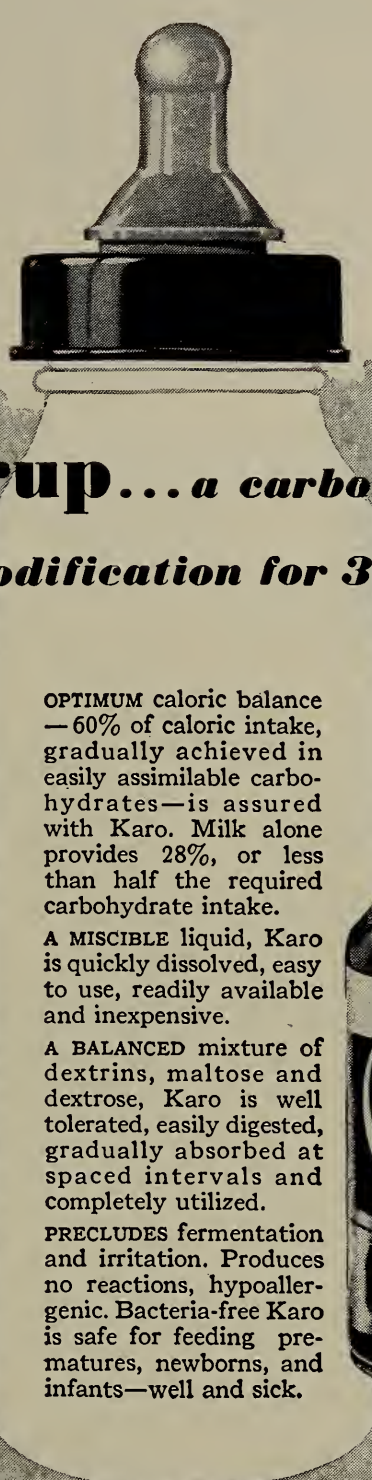
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Solution May Prevent Gangrene And Foot Amputation

An economical substance available in most doctors' offices can prevent gangrene and amputation of the feet in some cases, a Philadelphia physician said recently.

Dr. Meyer Naide reported in a recent issue of the *Journal of the American Medical Association* that this has been a chief problem in patients with severe ischemia of the foot.

He said of various substances tested the "most useful proved to be the old preparation, compound tincture of benzoin." This solution is most com-

monly used for steam inhalation in bronchitis. It is available in all hospitals and almost all offices and is simple to apply, he said. It dries quickly so that clothing may be applied to the areas coated within five minutes. The coating lasts for a day or two and can be renewed by the patient.

"It is difficult to estimate how many months of hospitalization and how many extremities were saved by this simple protective measure," he said. "Nevertheless, gangrene was prevented in many patients, and some extremities were saved as the result of preventing the initial break in the skin without which gangrene will usually not start."

(Continued in Back Advertising Section, Page 56)



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Spinal Puncture Headache

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HEADACHE is probably the most common untoward complication of spinal puncture. August Bier suffered a severe headache following his submission to the first attempt to produce spinal anesthesia in man in 1898. The incidence of headache following spinal puncture seems to vary little whether or not the puncture is followed by the injection of an anesthetic agent. Babcock,⁵ in 1913, reported an incidence of headache of 21 per cent in 5,000 cases. Koster and Weintrob,²⁵ in 1930, reported postspinal puncture headache in 10 per cent of 6,000 patients who received spinal anesthesia. Woodbridge,⁴³ in 1937, reported a 4 per cent incidence of spinal puncture headache in 1,381 patients. Jennings²¹ reported 30.6 per cent in 1939, while Hingson, Ferguson and Palmer,¹⁹ in 1943, reported an incidence of only 1 per cent in 5,150 cases. Although there is wide variation in the reported incidence of headache following spinal puncture, the majority of the recent reports indicate that the incidence is probably between 10 and 20 per cent.^{2, 4, 10, 12, 15, 39, 40}

Recently the authors made a study of a series of 515 consecutive cases in which spinal anesthesia was employed, with the idea of determining the incidence of spinal puncture headache. No attempt was made to direct the patient's attention away from the possibility of headache following anesthesia. In fact, each patient was told that headache was a common sequel

• *Headache is the commonest complication of spinal puncture. There is no significant difference in the incidence of headache after lumbar puncture, whether or not the puncture is followed by injection of an anesthetic agent. The sequence of events leading to postlumbar puncture headaches is probably (1) decreased volume of cerebrospinal fluid with lowered pressure; (2) increased differential between the pressure of the cerebrospinal fluid and the intracranial venous pressure; (3) dilation of venous structures with increase in brain volume; and (4) production of tension on the pain sensitive areas in the cranium.*

Prevention of postlumbar puncture headache consists largely in attempts to avoid the development of the pressure differential between that of the cerebrospinal fluid and intracranial venous pressure. Treatment consists of analgesics, hydration and attempts to restore normal cerebrospinal fluid pressure.

of spinal puncture. Each was then asked specifically if he did have a headache after operation. Even though the question was "leading," the answers obtained indicated that the incidence was almost the same as that commonly reported. Furthermore, contrary to a previous assumption, early ambulation after operation apparently did not materially increase the number of postspinal puncture headaches. There seemed to be an appreciably greater incidence of postpunc-

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TABLE 1.—Headache following spinal anesthesia

Type	Number	Postspinal headaches		Other headaches		All headaches	
		Number	Per cent	Number	Per cent	Number	Per cent
Spinal	291	17	5.8	8	2.7	25	8.6
Continuous spinal.....	224	21	9.4	10	4.5	31	13.9
Total	515	38	7.4	18	3.5	56	10.8

ture headaches, however, when the agent was administered by the continuous or fractional technique (Table 1).

Not all headaches complained of following a spinal puncture can be considered to be postpuncture headaches. Headaches unaffected by postural changes and described by the patient as similar to those they have been subject to were not considered to be true postspinal puncture headaches. In the present series the final judgment as to whether the discomfort was a new development or merely the recurrence of a chronic malady was left to the patient.

For many years postspinal puncture headache has been considered to be related to changes in cerebrospinal hydrodynamics. Most observers have ascribed these headaches to lowered intracranial pressure,^{2, 20, 28, 29, 33, 37, 42} although a few have noted that they may be associated with increased pressure.^{17, 23}

With the patient in the horizontal position, intracranial (vertex) pressure is usually the same as lumbar and cisternal pressure. Intracranial pressure usually varies from 50 to 180 mm. of mercury. With the patient erect, lumbar pressure may be as high as 300 to 500 mm. of mercury while the intracranial pressure may drop to +40 or even to -85 mm. of pressure. On occasions it may even reach -300 mm. of mercury.⁴² Changes in cerebrospinal fluid pressure probably closely parallel changes in venous pressure in the normal subject, although the cerebrospinal fluid pressure is usually somewhat higher than the venous pressure at any given level.

Wolff⁴² demonstrated that there are certain sensitive structures in the cranium the stimulation of which will produce pain. The pain produced by the stimulation of these regions may be interpreted by the subject as headache. Demonstration of these pain-sensitive areas was carried out on human beings undergoing intracranial surgical procedures under local anesthesia. The principal structures found to be pain-sensitive are: (1) the great venous sinuses, (2) the venous tributaries to the sinuses, (3) parts of the dura near the base of the brain, (4) dural arteries and (5) cerebral arteries at the base of the brain. The afferent nerve pathways for pain from these areas are by way of the fifth nerve for all those structures above the tentorium, while subtentorial pain is transmitted largely through the ninth and tenth nerves. Some of the pain, low in the subocciput, possibly is transmitted by the upper cervical nerves.

Pain caused by stimulation of pain-sensitive areas above the tentorium is referred to the head anterior to the ears and in the region of the eyes, while pain posterior to the ears and in the subocciput is probably from stimulation of sensitive areas below the tentorium.

Drainage headache is a well established clinical entity. The universal complaint of headache, usually very severe, during the course of encephalography under local anesthesia is evidence of the syndrome of drainage headache. It is a common observation that headache of this kind develops quite early in the procedure when only a small amount of fluid has been removed. Wolff⁴² produced headache experimentally in 11 subjects by the drainage of cerebrospinal fluid and found that headache developed usually when about 20 cc. of fluid had been removed. The headache became worse as more fluid was withdrawn and could be relieved in all subjects by restoring the cerebrospinal fluid pressure to its previous value. These experimentally produced drainage headaches as well as the headache that is a sequel to encephalography are in every way comparable to the headache that may follow spinal anesthesia or diagnostic lumbar puncture. Wolff stated that headache probably will start when approximately 10 per cent of the estimated total volume of cerebrospinal fluid is removed.

Although the overwhelming majority of the evidence seems to favor the hypothesis that the most important factor in the production of postlumbar puncture headache is the lowering of the cerebrospinal fluid pressure, other possible contributing factors must be considered.

Irritation of the pia-arachnoid by the anesthetic agent has been suggested as a possible cause of postspinal anesthetic headache. This seems unlikely, considering the very high dilution of the agent in the cerebrospinal fluid and the usual lack of a significant rise in protein content and cell count of the cerebrospinal fluid following spinal anesthesia.^{6, 8, 24} At operations involving opening of the dura following spinal anesthesia, seldom is any evidence of dural or meningeal irritation observed. Furthermore, the incidence of headache following diagnostic lumbar puncture is usually reported as high as that following spinal anesthesia.

Meningitis undoubtedly can cause severe headache, but only on very rare occasions could this be considered a cause of postpuncture headache. Other

symptoms of meningitis would probably be so evident as to leave little doubt as to whether this was the principal etiologic factor in a particular case.

Weintraub, Antine and Raphael⁴⁰ suggested that the decrease in intra-abdominal pressure after delivery is an important factor in the production of post-puncture headache when spinal anesthesia is used in obstetrics. They postulated that the pooling of the blood in the splanchnic vessels after the sudden release of intra-abdominal pressure lowers the pressure in the intracranial veins, permitting the brain to sag as some of its basilar cushion is lost. They advocated the use of tight abdominal binders as an aid in the correction of this imbalance in the intracranial circulation. They expressed belief that the increased return of blood following abdominal compression increases the pressure in the right auricle, which is transmitted by the jugular veins to the cerebral vessels. A possible additional mechanism whereby tight abdominal binders might contribute to restoration of proper balance to the intracranial circulation is suggested by the work of Batson.⁷ He demonstrated that the current of the flow of blood in the vertebral plexus of veins can be reversed by increased intra-abdominal pressure.

Although there is experimental evidence to the effect that even pronounced increase in intracranial pressure usually does not cause headache,⁴² certain clinical observations seem to indicate that at times increased intracranial pressure may be a factor in the production of headache. Hand¹⁷ observed that some patients in whom headache developed incidental to repeated subarachnoid injections of ammonium sulfate for the relief of intractable pain had increased intracranial pressure. It is not uncommon for patients to complain of transitory headache occurring at the time of injection of the spinal anesthetic agent when large volumes (10 to 20 cc.), such as are used with the Howard-Jones technique for Nupercaine, are employed.

In spite of the fact that other factors may be present and at times contribute to postspinal puncture headache, it must be concluded that in most instances this complication is related to a lowering of the cerebrospinal fluid pressure owing to a reduced volume of fluid. Obviously, this decrease in cerebrospinal fluid volume could be caused by a decrease in the fluid output or by leakage of the fluid after it is formed. There seems little doubt that it is the result of leakage through the hole left in the dura by the spinal puncture needle. There is ample evidence that this hole remains for several days after spinal puncture.^{2, 13, 32, 34} Mixer³² noted that the hole made by the spinal needle in the dura was present at operation six days after spinal puncture. Franksson and Gordh¹² observed the hole still patent as late as 14 days after spinal puncture. The negative

pressure reported to exist in the epidural space could be a factor contributing to the lowering of cerebrospinal fluid volume because of a hole in the dura. The incidence of failure in attempts to produce spinal anesthesia within the first few days after spinal puncture is notoriously high. In one case observed by the authors, three successive unsuccessful attempts were made to induce spinal anesthesia for the removal of a ruptured intervertebral disk. The anesthetic agent was given approximately 48 hours after myelography. Even though a free flow of cerebrospinal fluid was obtained with each attempt, no more than a few scattered areas of patchy anesthesia in the thighs and lower trunk could be induced. General anesthesia was induced, and at operation a large collection of epidural fluid was noted, and it was observed that the anterior and posterior walls of the dura were practically in apposition. Undoubtedly it was into this fluid-containing epidural space that the anesthetic agent was injected.

Further evidence that lowering of cerebrospinal fluid pressure is the prime etiologic factor in the production of postspinal puncture headache is the fact that measures which restore the volume of cerebrospinal fluid tend to relieve the headache. Injection of normal saline solution into the subarachnoid space is always followed by relief.² The intravenous injection of hypotonic solution is reported^{3, 37} to be helpful. On the other hand, hypertonic solutions given intravenously tend to increase the symptoms.³⁰

The intensity of postspinal puncture headache is increased by bilateral jugular compression. This occurs in spite of the well known fact that this procedure is accompanied by a substantial rise in cerebrospinal fluid pressure. Jugular compression, in addition to causing a secondary rise in cerebrospinal fluid pressure, results in an earlier primary rise in intracranial venous pressure. This increase in symptoms with jugular compression undoubtedly is the result of stimulation of the pain-sensitive areas by distention of veins and perhaps by an increase in volume of the brain. This increase in symptoms from jugular compression is difficult to reconcile with the benefits derived from the use of tight abdominal binders, reported by Weintraub, Antine and Raphael.⁴⁰

It seems likely that postspinal puncture headache is caused by the stimulation of the pain-sensitive areas in the cranium that are concerned with anchoring the brain to the cranial vault. The chain of events leading to stimulation of these pain-sensitive areas may be as follows: (1) lowering of the cerebrospinal fluid pressure due to decreased volume, (2) production of a greater differential between the cerebrospinal fluid pressure and the intracranial venous pressure, bringing about (3) dilation of the venous structures and perhaps some increase in brain volume because of the venous dilation and edema.

What are the characteristic features of drainage or postspinal puncture headache? The headache occurs as a sequel to spinal puncture at varying intervals, from a few hours to several days. The headache may be mild but is frequently a dull, deep ache. It is usually not, but on occasions may be, throbbing. It is more often frontal but may be occipital, suboccipital or bitemporal. A small proportion of patients complain of pain or stiffness at the nape of the neck.

Characteristics of postspinal puncture headache which would seem to indicate that it is due to stimulation of the pain-sensitive areas as a result of lowering of cerebrospinal fluid pressure are: (1) the headache is relieved by intraspinal injection of physiologic saline solution in amounts sufficient to restore spinal fluid volume, (2) the headache is more severe when the patient is in the erect position, (3) it is usually relieved or made much milder when the horizontal position is assumed, (4) shaking of the head increases the severity of the headache and (5) the headache is made worse by jugular compression.

PREVENTION

Although it is difficult to evaluate the benefits of each measure designed to decrease the incidence of postspinal puncture headache, other than the obvious one of using some other kind of anesthesia, the adoption of certain measures would seem reasonable, even though it cannot be said that strict adherence to any one or all of them will prevent postspinal puncture headache.

It is well known that anyone's reaction to discomfort related to the head is in no way different from his reaction to pain in other parts of the body. It is probably wise to select some other form of anesthesia for patients who have a history of severe headaches or who are obviously likely to react poorly to pain of any type. Furthermore, except for very unusual reasons, spinal anesthesia should not be selected for patients who have a history of headache following a previous spinal puncture. However, the authors' investigations indicated that the history of a headache following spinal anesthesia does not mean that subsequent spinal anesthesia will necessarily be followed by a headache. Conversely, freedom from headache after one spinal puncture is not a guarantee of permanent immunity.

Anything that tends to reduce the leakage of spinal fluid from the subarachnoid space after spinal puncture would be expected to decrease the incidence of spinal puncture headache. There has been a tendency to use smaller and smaller spinal puncture needles. Cann and Wycoff⁹ reported upon a series in which a 27 gauge needle was used for spinal anesthesia in an attempt to reduce the number of cases of postspinal puncture headache. The incidence of headaches with this small needle was approximately 5

per cent. Greene¹⁵ (1949) reported a decrease in the incidence of headache following spinal anesthesia employed for vaginal delivery when he changed from a 22 gauge to a 24 gauge needle. More recently¹⁴ (1950) he advocated the use of a 26 gauge needle and noted a decrease in the incidence of postspinal headache from 22 per cent to 0.4 per cent in 700 patients. Recently Whitacre⁴¹ advocated the use of a needle with a point resembling that of a pencil. This needle is designed to separate dural fibers rather than sever them. He reported a significant decrease in the incidence of postspinal headache when this needle was used. Maxson³¹ suggested that the bevel of the needle should be parallel with the long axis of the body so that there will be a tendency to separate fibers of the dura rather than to cut them in two. Franksson and Gordh¹² counted dural fibers severed with the needle point and noted fewer fibers cut when the bevel was held parallel to the long axis of the patient.

If the patient is held very quiet during the spinal puncture the danger of a dural tear is probably lessened. The approximately 50 per cent greater incidence of headache in the present series when the continuous technique was employed (Table 1) would seem to lend support to this assumption. It seems likely that movements of the vertebral column incidental to turning the patient into position with a needle in the subdural space would tend to enlarge the dural opening. Furthermore, an increased incidence of postpuncture headache might be expected if more than one puncture is made.

The insistence that patients be kept in the horizontal position without a pillow for a given length of time after operation probably is of little value in the prevention of postpuncture headaches.¹ Apparently the patient who will develop a headache following spinal puncture will do so irrespective of whether or not he is kept flat in bed for 24 to 48 hours following spinal puncture. This is understandable in light of the long time the opening made in the dura by the spinal needle remains patent.

Kaplan and Arrowood²² reported a significant decrease in the incidence of postspinal headache when they injected 10 to 20 cc. of physiologic saline solution into the epidural space immediately following the injection of the anesthetic agent. After the agent was injected they merely withdrew the spinal puncture needle until the point was in the epidural space, then injected the saline solution before removing the needle. They explained this benefit on the theory that a head of pressure in the epidural spaces prevents leakage until the hole can be sealed by a fibrin clot or by the pia-arachnoid.

Increased fluid intake following spinal puncture might be expected to be of both prophylactic and therapeutic value. Recently the authors instituted the practice of administering intravenously 1,000 cc. of

5 per cent dextrose in water to all patients receiving spinal anesthesia except when such a procedure is contraindicated for some medical reason. This is started in the operating room and is done regardless of how minor the surgical procedure. Although sufficient data are not as yet available, the impression thus far is that the incidence of postspinal puncture headaches has been materially decreased since this regimen has been followed.

TREATMENT OF POSTPUNCTURE HEADACHE

The treatment of this most distressing complication still leaves much to be desired. Fortunately, most postspinal puncture headaches are mild and respond well to ordinary analgesics, such as aspirin.

Pituitrin has been used both prophylactically and therapeutically for postspinal puncture headache, probably with the idea of decreasing fluid excretion, but its value is questionable.^{3, 15, 32, 33, 37} Caffeine sodium benzoate has been used more or less empirically for years. The effectiveness of this drug is likewise doubtful.

Deutsch¹¹ reported encouraging results following intravenous infusion of 5 per cent ethyl alcohol in 5 per cent dextrose in distilled water. A total of 1,000 cc. of solution was given in three and a half to four hours. Deutsch sometimes found it necessary to give a second infusion. This treatment is aimed at dilatation of the vessels of the choroid plexus and at the same time supplying a hypotonic solution to enter into the formation of cerebrospinal fluid.

Krueger, Stoelting and Graf²⁶ used 500 to 1,000 cc. of 5 per cent dextrose in .45 per cent sodium chloride to which was added 100 mg. of nicotinic acid, given intravenously, on the same basis, also with beneficial results.

Targowla and Lamache,³⁸ in 1927, mentioned the use of ergotamine in the treatment of spinal puncture headaches. Guttman¹⁶ reported the drug gave complete relief in 82 per cent of patients with postpuncture headaches. Lennox, von Storch and Solomon,²⁷ however, stated that it was of no value in the treatment of drainage headache.

True postspinal puncture or drainage headache can always be greatly relieved and usually completely eliminated by placing the patient in the horizontal position. This may be quite objectionable to a patient who has had a spinal anesthetic for a relatively minor surgical procedure and, except for the headache, has little if any discomfort. Sometimes it may be helpful to resume the erect position gradually once the headache has been relieved by assuming the horizontal position. To do this, the bed can be turned up in stages, with several minutes or even hours taken to change from horizontal to completely erect.

The more intractable postspinal puncture headache should be investigated carefully. A lumbar puncture should be performed and the pressure of cerebrospinal fluid determined. Chemical, microscopic and bacteriologic investigations should be carried out. This is particularly applicable in cases of persistent headache unaffected by postural changes.

As with experimental drainage headache, postspinal puncture headache can always be relieved by injection of physiologic saline solution to restore the pressure of the cerebrospinal fluid. To subject a patient with postspinal puncture headache to another spinal puncture requires courage both on the part of the patient and of the physician. Although it would seem that only transitory relief might be expected from the restoration of spinal fluid pressure to normal by the subarachnoid injection of physiologic saline solution, this relief may be permanent after a single injection. If it is not, the procedure may be repeated and the relief may be permanent after the second or third injection.

Rice and Dabbs³⁵ reported that by peridural injections of saline solution they obtained relief of postpuncture headache in 21 of 22 patients. They demonstrated that the epidural injection of saline solution produced a prompt rise of as much as 100 mm. of pressure in the subarachnoid space. The rise in cerebrospinal fluid pressure and relief of headache was attributed to a "splinting" effect of the epidural fluid. From observations in a few cases in which the authors have used this method it seems to be very worth while. It has the obvious advantage over subarachnoid injection of saline solution of not requiring a second puncturing of the dura.

The use of abdominal binders for the relief of spinal puncture headache may be helpful particularly if the headache has developed after the use of spinal anesthesia for delivery.⁴⁰

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Treatment of Carcinoma of the Uterine Cervix*

A Commentary on Current Methods

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SEVERAL DISQUIETING STATEMENTS in the recent American Cancer Society monograph on Cancer of the Female Genital Tract¹ warrant further discussion.

First, the suggestion that operation with conservation of the ovaries is the treatment of choice "if the lesion is small and the patient is young, i.e., less than 35 years" should be more fully explained. This approach is widely accepted in proven cases of carcinoma *in situ*. However, it is probable that to most readers of this monograph, the words "small" and "early" with reference to carcinoma of the cervix imply a lesion of the clinical Stage I type. The ever-increasing tendency to stress the surgical approach in so-called early carcinoma of the cervix receives a stimulation that surely is not the intent of the authors. It is quite generally recognized that regardless of the trends of preference in any hospital or clinic, be they toward operation or irradiation, both forms of treatment should be available. Indeed, following a competent unbiased appraisal of the patient and the cancer, one patient with an early lesion will be advised to have operation, while for the next patient with a similar lesion radiation will be recommended.

Second, the suggestion in the monograph that the scope of the surgical excision be determined on the basis of frozen section examination of the obturator and iliac nodes implies a competency of tissue evaluation difficult to accept. Limiting immediate examination to these two groups of nodes seems to neglect the possibility of metastatic involvement elsewhere. Next to the paracervical (ureteric) and the small parametric nodes, the obturator and the iliac groups are most frequently involved. However, bypassing of these two groups with involvement of the nodes of the hypogastric or sacral groups occurs frequently enough to be considered of major importance. In material observed by the author, involve-

• A monograph on Cancer of the Female Genital Tract published by the American Cancer Society seems to put greater than warranted stress on the value of operative treatment as compared with radiotherapy of "small" or "early" lesions of the uterine cervix. The terms themselves may be misleading in that many readers may mistakenly take them to mean Stage I lesions. A diagnosis of Stage I is no assurance that extension has not occurred (as it had in 23.5 per cent of 17 cases of Stage I carcinoma observed by the author).

In addition, there is suggestion in the monograph that the extent of operation may be reliably determined on the basis of frozen section examination of the obturator and iliac nodes. This overlooks the considerable possibility of metastasis that skips these groups and extends to others beyond (as it did in one of the 17 cases).

Moreover, preoperative diagnosis of the stage of a lesion is not wholly reliable. In a series of 37 cases observed by the author in which the preoperative diagnosis was Stage I carcinoma of the cervix, pathological examination of tissues, after total hysterectomy of the Wertheim type, revealed that in nine cases the growth was actually at a more advanced stage. Upon further examination of tissues it was noted also that the excision was inadequate in 33 of the 37 cases.

ment of nodes was noted at autopsy in four of 17 untreated patients (23.5 per cent) with Stage I carcinoma of the cervix. If a fifth case in which there was involvement of two positive small anomalous nodes in the subvesical space were included, the incidence of nodal involvement in the 17 cases of proven Stage I carcinoma of the cervix would be 29.3 per cent. In two of the four cases with "positive" regional nodes, the obturator group was involved; in another the obturator and external iliac, and in the fourth the left lateral sacral group. It is of further interest that the involvement in the "positive" nodes was overlooked in two of the four cases when the study was limited to three blocks of each node. Not until re-study was

*This commentary has been prepared, at the request of the Cancer Commission of the California Medical Association, by a member of the Commission particularly qualified by wide experience in gynecologic surgery and by original investigational studies of uterine cancer.

The Cancer Commission and its Advisory Committee are in unanimous disagreement (see page 97 of this issue of CALIFORNIA MEDICINE) with some of the therapeutic implications in the widely distributed monograph¹ referred to in the text. In particular, the Commission believes that the emphasis on surgical treatment of carcinoma of the cervix is ill-advised. From the standpoints of wider applicability, lesser morbidity, and better over-all end results, radiation therapy is superior to operation in the majority of patients with this form of cancer.

carried out with five blocks was the nodal involvement noted. It is certainly within the realm of reason that if a more thorough examination of each node were carried out in such cases, the observed incidence of involvement would be greater. Hence, the proposal that the presence or absence of malignant emboli in a node can be detected consistently by a hurried frozen section examination is certainly most questionable.

Of further interest is the matter of establishing the true clinical status of the disease before operation or necropsy. In a series observed by the author, a study was made of tissue and organs in 37 cases in which the diagnosis was Stage I cancer of the cervix and the treatment was the Wertheim type of total hysterectomy and lymphadenectomy. The following data were obtained: In eight of the 37 cases (21.5 per cent) the growth was considered Stage II and in one case (2.7 per cent) Stage III. Thus, in 24 per cent of the 37 cases in which thorough and competent preoperative examinations were carried out, the lesion was found to be in a more advanced stage than had been diagnosed. Further examination of the organs and tissues revealed inadequate excision

in 33 (89 per cent) of the cases. These observations are both disturbing and discouraging in the assay of the various ideas of what constitutes radical operation for carcinoma of the cervix. Certainly no half-way measure is conscionable. Since the possibility of unsuspected extension is always present, if operation is to be done at all it should be adequate.

Recognizing that the Cancer Society's monograph is mailed to some 65,000 physicians and possibly is accepted as the final word by a large number, the author believes stress should have been put on the value of irradiation, except in the occasional cases in which the growth is radio-resistant. To stress the value or superiority of an approach that possibly has proven worthwhile in the hands of a very competent gynecological surgeon in a highly organized clinic disregards the tendency of too many self-admitted competent surgeons to accept this *modus operandi* as the final answer.

1136 West Sixth Street.

REFERENCE

1. Traut, H. F., and Benson, R. C.: Cancer of the Female Genital Tract, American Cancer Society, Inc., New York, N. Y., 1954.

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As your personal physician I consider it both a privilege and a matter of duty to be available in case of an emergency. But, being only human you can understand that there are times when I may not be on call. I might be at a medical meeting outside the city, on a bit of a vacation—or even ill.

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Isoniazid Therapy in Chronic Ulcerative Colitis

A Preliminary Report

DAVID A. SUSNOW, M.D., San Francisco

MANY DRUGS and forms of treatment have been proposed for dealing with chronic ulcerative colitis, and some of them, while appearing to help in some cases, fail in the great majority. Nevertheless any drug which seems to be of aid should be investigated as to its possibilities.

So far as could be determined, isoniazid (isonicotinic acid hydrazide) has not been used in chronic ulcerative colitis. Favorable results with the drug have been noted¹ in nonpulmonary tuberculous lesions such as draining sinuses and fistulae and mucous membrane tuberculosis. The author used isoniazid in five cases of chronic ulcerative colitis. Dosage used was similar to that employed in tuberculosis, the indicated daily dosage being in the range of 3 to 5 mg. per kg. of body weight (150 to 300 mg. a day for the average adult).

The drug was first used in this series in a young man who was first observed September 28, 1953, with an anorectal fistula. He gave a history of chronic ulcerative colitis of four years' duration associated with diarrhea and repeated perianal abscesses and fistulae. Upon proctosigmoidoscopic examination, conditions typical of chronic ulcerative colitis were noted. Further investigation was negative for tuberculosis, regional ileitis and amebiasis. The patient was given isoniazid orally on a schedule of 300 mg. in three divided doses daily. When proctoscopic examination was carried out 11 days later, the rectal mucous membrane was practically normal in appearance, although it bled easily when touched with a cotton applicator. The patient felt better and had gained five pounds in weight. Diarrhea had ceased. The drug was continued in reduced dosage (Table 1) and the fistula was excised on November 23, 1953. Healing was complete and satisfactory on January 12, 1954. The drug was discontinued on March 8, 1954. When the patient was last examined, six months after the beginning of therapy, there was no relapse of chronic ulcerative colitis.

The drug then was given to four other patients (Table 1) with good results in each (Table 2). Particularly noteworthy are Cases 2 and 5. The patient in Case 2 had pronounced response in ten days, after having been in a relapse for five months, and for the

• Uniformly good response to isoniazid therapy was observed in five cases of chronic ulcerative colitis during an initial period of 3 to 6 months of treatment. In all cases the disease was in relapse at the time administration of the drug was started. There was both subjective and proctoscopic evidence of improvement. Isoniazid has little significant or serious toxicity.

first time in many months began to have normal stools. In Case 5 the patient had considerable improvement in three weeks; and when proctoscopic examination was carried out two months after the beginning of therapy, the mucous membrane of the rectum was practically normal in appearance and was in the best condition observed in six years.

Evaluation of the response to the drug was made primarily from proctoscopic findings. (In all cases, ulcerative colitis was confirmed by x-ray examination, but roentgen studies were not carried out after therapy.) All five patients said that they felt better. As soon as improvement was noted, proctoscopically and clinically, from ten to fourteen days after institution of therapy with 300 mg. in three divided doses daily, dosage was reduced to 150 mg. in 24 hours, in three divided doses.

TABLE 1.—Patients with chronic ulcerative colitis treated with isoniazid

Age and Sex	Duration of disease (years)	Duration of relapse (months)	Associated conditions
31 M	4	2	Fistula-in-ano
69 F	40	6	Coronary heart disease
33 F	2	3	None
40 M	1	2	None
46 F	6	6	None

TABLE 2.—Results of isoniazid therapy in chronic ulcerative colitis

Case	Time required for response to drug 300 mg. per 24 hours (days)	Maintenance dose after response (mg. per 24 hours)	Duration of therapy to date (months)	Relapses
1	11	150	5	None
2	10	150	4	None
3	14	150	4	None
4	14	150	3	None
5	10	150	3	None

¹From the Department of Proctology, Mount Zion Hospital, San Francisco, California.

COMMENT

No attempt is being made at this time to explain the foregoing results. Inasmuch as isoniazid has little significant or serious toxicity,¹ this preliminary report is rendered so that the drug may be tried out in a larger series of cases of chronic ulcerative colitis and a proper evaluation made as to its place in the

treatment of a disease which is one of the great enigmas of medicine.

2211 Post Street.

REFERENCE

1. American Trudeau Society: Current status of isonicotinic acid hydrazide in the treatment of tuberculosis, Am. Rev. Tuberc., 65:649, March 1952.

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About the Cost of Good Medical Care...

While I know you understand that I, as your personal physician, am not in complete control of all medical care costs, I still would like to emphasize a few facts:

From your own experience you know that not-so-serious cases usually involve nothing more than the moderate expense of home or office visits and medication.

It is when serious illnesses or accidents require hospitalization that we may run into financial problems. Hospital charges, special nurses, drugs and appliances are all factors over which I have no *direct control*.

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Postmenopausal Bleeding of Nonmalignant Origin

EDWARD J. BOMZE, M.D., Los Angeles

VAGINAL BLEEDING after completion of the menopause is usually viewed with alarm by patients and physicians. Even a relatively uninformed woman senses the ominous implications and seeks advice and reassurance. It is quite generally accepted and taught to both the medical profession and the lay public that vaginal bleeding coming on after the menopause must be considered as owing to malignant disease unless proven otherwise. Yet it is easier to demonstrate the presence of a malignant tumor if one exists in a given patient than it is to be certain there is no malignant lesion even though results of diagnostic procedures are all negative. Even when comprehensive examination elicits no evidence of carcinoma, the disturbing thought frequently remains that complete removal of the uterus and adnexa might disclose an early malignant tumor.

Since this situation, disturbing to both patients and physicians, is encountered frequently not only by gynecologists but by general surgeons and general practitioners, further inquiry into the benign causes of bleeding at this period of life would seem worth while. It would be very comforting to the patient if she could be told with confidence that there are a number of specific benign conditions which can cause bleeding after the menopause. With this purpose in mind, the author reviewed the records of 102 patients who were admitted to hospital because of postmenopausal bleeding and in whom no evidence of malignant disease was found after careful investigation. Some useful concepts were suggested by this study.

The patients were from 39 to 81 years of age. More than 60 per cent were between the fiftieth and sixtieth years. The interval that had passed between cessation of menses and the occurrence of bleeding ranged from four months to 30 years. There was no significant coincidence of onset of bleeding and length of time since cessation of menses.

The amount of bleeding varied. In some instances it was described as a pink or brown discharge or "spotting"; in others, as repeated or continuous vaginal bleeding, occasionally so profuse as to be called hemorrhage and to be associated with a low hemoglobin content in the blood when the patient entered the hospital. The duration of bleeding before the patient entered the hospital varied from one day to as long as four years (intermittently). It was noted that in all except two or three cases surgical measures for diagnosis and treatment were insti-

• *A study was made of the medical records of 102 patients hospitalized because of postmenopausal bleeding. Diagnostic procedures used included vaginal examination, Papanicolaou smears, curettage and cervical biopsy.*

The major associated pathological conditions (possibly etiological factors) in the series were chronic cervicitis, fibromyoma of the uterus, endometrial polyps, cervical polyps and adenomyosis of the uterus. Sclerosis of the uterine vessels was suggested as another possible cause of this type of bleeding. Neither the amount and type of bleeding nor the pattern of associated symptoms were of diagnostic value.

A history of hormonal therapy prior to the onset of bleeding is not sufficient evidence to establish that as the cause of the bleeding and the patient should be as completely investigated as if this history were not present.

In over 61 per cent of cases in this series, uterine curettage with or without cervical biopsy, cauterization, conization or trachelorrhaphy, was the only treatment required for both diagnosis and therapy.

tuted promptly after the patient consulted a physician.

The amount and duration of bleeding was not of any particular diagnostic value but there was a suggested relationship between the amount of bleeding and the type of lesion. In general, bleeding caused by minor lesions of the vagina and cervix in this group of patients consisted mainly of bloody discharge or spotting. Bleeding of large amount was in the majority of cases associated with disease in the endometrium or uterus. However, these coincidences were not sufficiently constant to be considered diagnostic criteria.

In only 10 of the 102 records was there reference to hormone therapy and its relation to the bleeding under consideration. In seven cases it was said specifically in the history that the patient had been treated with estrogens or some hormone preparation before or concurrently with the bleeding. In three cases it was stated that the patient had not had hormone therapy. Although in the other 92 records no reference was made to the question of hormone therapy, it is more than probable that this factor was considered, for the patients were otherwise care-

fully studied. Data included in the office records of a patient are not always entered in the hospital charts, most of which are written by externs and interns. It was impractical to interview all the individual attending physicians. In any case, the information so obtained would have been of doubtful value since it would be hazardous to ascribe vaginal bleeding to hormone effect on the basis of the history alone, without further investigation as to other possible causes, for a patient who has had hormone therapy can also bleed from other causes.

Only about one-third of the patients had associated symptoms or complaints—feeling of pressure in the lower abdomen, lower abdominal cramps, mild backache, suprapubic discomfort, headache, soreness of the breasts, and a feeling of irritation in the vagina and vulva. These complaints appeared to bear no relation to the actual cause of the bleeding.

The diagnostic procedures used in this series of cases, in addition to pelvic examination, consisted of Papanicolaou smears, uterine curettage, biopsy of the cervix, and biopsy of the vagina.

The pathologist's reports in these cases showed a fairly large variety of lesions (Table 1). The most frequent pathologic diagnosis was chronic cervicitis, associated in some instances with ulceration or erosion of the cervical epithelium. Next most common were fibromyomata of the uterus (almost all of them submucous) and single and multiple fibroid tumors. Endometrial polyps were observed almost as often as fibroid tumors and in a fair number of instances were associated with them. The general impression at present seems to be that cervical polyps are the most frequent cause of bleeding from nonmalignant lesions after the menopause. However, this diagnosis was recorded in only 20 per cent of the cases in this series.

Adenomyosis was the diagnosis in approximately 10 per cent of these patients. In a number of instances it was associated with fibroid tumors; in the remainder it was either the only causative factor or was accompanied by minor lesions. This is surprising for two reasons. First, adenomyosis is not generally thought of as a cause of uterine bleeding; second, adenomyosis and endometriosis are believed to undergo involution at the time of the menopause. The mechanism by which adenomyosis can produce uterine bleeding is not clear and should certainly be studied further.

In 12 cases the diagnosis was endometrial hyperplasia. Eight of the women with this diagnosis had completed the menopause eight months to four years previously, and four had not menstruated for 17 to 30 years. None of these women had a history of hormone therapy, but it is difficult, on the basis of accepted theories of the menopause, to account for hyperplasia in the absence of female sex hormones from some source. Material curetted from one 44-

TABLE 1.—Pathologic diagnoses in 102 cases of postmenopausal vaginal bleeding not caused by malignant disease

Diagnosis	No.	Remarks
Chronic cervicitis.....	38	4 with ulceration
Fibromyoma of uterus.....	23	
Endometrial polyps	21	
Cervical polyps	19	
Endometrial hyperplasia.....	12	
Adenomyosis uteri.....	10	
Fibrosis of uterus.....	10	
Erosion of cervix.....	7	
Cystic glandular hyperplasia of cervix.....	5	
Squamous metaplasia of cervix, mild.....	2	
Squamous metaplasia of endometrium.....	1	
Chronic vaginal ulcer.....	1	Non-specific
Fibro-epithelial papilloma of vagina.....	1	
Theca cell tumor of ovary.....	1	Benign histologically
"Foci of necrosis in endometrium with deciduoid reaction in stroma".....	1	
Hyperkeratosis of cervix.....	5	
No definite pathologic diagnosis.....	12	

year-old patient who was two years past the menopause was reported as showing "foci of necrosis suggesting a postparturient reaction, with a deciduoid reaction in the stroma"—a diagnosis which could be explained similarly on the basis of hormonal effect.

There were two instances of mild squamous cell metaplasia of the cervix and one of "squamous cell metaplasia of the endometrium." It may be that the lesions in these three cases are early carcinoma *in situ*, but the question has not been resolved as yet, for the patients all had curettement within the past year and a half and none has had any further bleeding.

In many of the cases in which the uterus was removed, sclerosis of the uterine vessels was noted in the pathologist's report. The observation was made often enough in this series to suggest the possibility that sclerosis may in some way have been an etiologic factor in the bleeding that occurred from senile atrophic uteri, many of which, on preliminary curettement, did not yield sufficient endometrial tissue for microscopic study.

In 23 cases, treatment consisted of simple dilatation and curettage; in 41, curettement was combined with biopsy of the cervix; and in five, biopsy of the cervix was done with or without cauterization, conization, or trachelorrhaphy. One patient had cervical amputation; 39 had hysterectomy, done vaginally or abdominally, with bilateral salpingo-oophorectomy also in most cases.

Follow-up information was obtained on about 50 per cent of the patients. The remainder were either too recently treated for evaluation or were no longer in communication with the physicians who attended them. Only one patient is known to have had recurrence of bleeding. She was a 55-year-old virginal

woman who, three years after menstruation stopped, began to bleed vaginally every two weeks, at times profusely. After eight months she consulted a physician who found nothing of significance on examination, but nevertheless did a diagnostic curettement. The material obtained was scanty and it was reported as showing "an occasional glandular struc-

ture with no evidence of malignancy." The patient was well for six months afterward and then bleeding began again. Total hysterectomy was done and an early endometrial carcinoma was discovered. Three years later she was free of disease and was being examined at regular intervals.

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Thyroid Carcinoma

An Approach to Management of the Disease

G. L. SCHOLNICK, M.D., G. ARNOLD STEVENS, M.D., and
J. M. BEAL, M.D., Los Angeles

INTEREST IN THE MANAGEMENT of carcinoma of the thyroid gland has increased recently because attention has been focused on two factors related to this disease. First, the high incidence of carcinoma in solitary thyroid nodules has led to excision of many such lesions. It seems likely that this approach will lead to the detection of a larger number of neoplasms in the early phases of development. Second, radioactive iodine (I^{131}) has become available and is used frequently in the diagnosis and treatment of thyroid diseases including neoplasms. The usefulness of radioactive iodine in the therapy of thyroid carcinoma is still being evaluated.

This report is based on observations of 34 patients with carcinoma of the thyroid gland who were observed between 1940 and 1953 on the surgical service at the Veterans Administration Center, Los Angeles.

RESULTS OF STUDY

Incidence: Most of the patients in a Veterans Administration hospital are men, and 30 of the patients in this series (85 per cent) were men. The youngest was 19 and the oldest 71 years of age and the average age was 43 years.

Symptoms (Table 1): Enlargement of the thyroid gland without other symptoms, was the most common symptom; it occurred in 13 patients. The presence of the goiter was previously unknown to three of these patients and was detected during a routine physical examination. In six patients a mass at the side of the neck representing lymph node metastasis was the presenting symptom. Four patients, who had had goiter for years, sought medical attention because of recent weight loss. Four had noticed recent rapid increase in size of a thyroid nodule which had been present for years. Two had painful, enlarging thyroid glands. Dysphasia and dysphonia, due to an enlarged goiter, were the presenting complaints in only one patient. In one instance a routine x-ray film of the chest revealed a metastatic lesion in the lung, which led to the discovery of the primary thy-

• A clinical and pathological study was made of a series of 34 consecutive patients with thyroid carcinoma. Carcinoma occurred only in nodular goiters, and in the majority of cases was found in a gland with a solitary nodule. The degree of firmness to palpation of a thyroid nodule is unimportant in the diagnosis of carcinoma of the thyroid since hardness was an infrequent finding. In the diagnostic use of radioactive iodine, scintigram studies of a nodular goiter usually revealed an area of decreased function at the site of a thyroid carcinoma.

Twenty-three per cent of the 34 patients with thyroid carcinoma died within five years. The duration of survival for various patients was compared with the type of treatment administered.

It is believed that solitary thyroid nodules are best treated by lobectomy. Total thyroidectomy is indicated in cases of large thyroid carcinoma and also for smaller tumors if papillary adenocarcinoma. Radical neck dissection is warranted if lymph node metastasis is present and limited to the neck; and also in the absence of metastasis if the tumor is papillary in histologic pattern. Surgically inaccessible metastatic lesions are best palliated by radioactive iodine or external irradiation.

roid carcinoma. In one patient a small focus of unsuspected carcinoma was observed during thyroidectomy for a toxic nodular goiter. The two remaining patients had previously had operation elsewhere and the original symptoms were not recorded.

The age at which thyroid or cervical node enlargement first appeared varied from 9 to 71 years, with an average age of 38 years. In one third of the cases such an enlargement was noted before the thirtieth year. In 30 per cent of patients goiter had been present more than six years, and one patient had had goiter for 25 years before thyroidectomy was performed.

Signs: All 34 patients had nodular goiters. The size of thyroid enlargement at the time of examina-

Presented before the Section on General Surgery at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

From the Veterans Administration Center, Los Angeles, California, and the Department of Surgery, University of California Medical School, Los Angeles.

TABLE 1.—Symptoms first noted in 34 patients with thyroid carcinoma

Asymptomatic goiter.....	13
Lateral cervical metastasis.....	6
Goiter plus recent weight loss.....	4
Recent growth in thyroid nodule.....	4
Painful, enlarging goiter.....	2
Dysphagia and dyspnea.....	1
Lung metastasis.....	1
Toxic nodular goiter.....	1
Unknown	2
	34

tion could be accurately ascertained from the records in only 16 of the patients, all of whom had clinically solitary thyroid nodules. These nodules varied from 5 mm. to 5 cm. in diameter with an average of 2 cm. Only five thyroid nodules in this series were recorded as being unusually hard. Only one patient had symptoms of hyperthyroidism.

Use of radioactive iodine: After I^{131} became available at this hospital in 1949, each patient was given a diagnostic tracer dose of 1 to 2 microcuries of I^{131} to determine the functional activity of the thyroid gland.¹ Following this test, doses of between 200 and 300 microcuries of I^{131} were given in order to obtain a scintigram of the neck.¹⁰ The amount administered depended on the maximum uptake of the tracer dose by the thyroid gland. In five of the six patients with thyroid carcinoma studied preoperatively in such a manner, an area of decreased function was demonstrated at the site of the carcinoma (Figure 1).

Four to six weeks following thyroidectomy, radioactive iodine was again administered to determine if functioning thyroid tissue remained in the neck. Preliminary observations, which will be published later,² revealed that metastatic lesions, if present, were demonstrated by means of I^{131} much more consistently when total thyroidectomy had been performed than after partial thyroidectomy. If metastatic lesions were not demonstrable by the techniques described above, they sometimes could be detected by administering thyrotropic hormone intramuscularly before the dose of I^{131} . The use of propylthiouracil for one month to increase the I^{131} uptake in cases in which metastasis was suspected, according to the technique of Rall,¹² was unsuccessful in two patients.

Pathology: The predominant histologic type encountered in this series was papillary adenocarcinoma, and it occurred in 14 patients. Solid carcinoma was found in seven patients, and a mixed carcinoma in seven others. Four cases were classified as follicular adenocarcinoma and one as Hurthle cell carcinoma. One patient had a giant cell carcinoma.

Ten patients with cervical lymph node metastasis underwent radical neck dissection. The histologic types in this group were papillary adenocarcinoma in

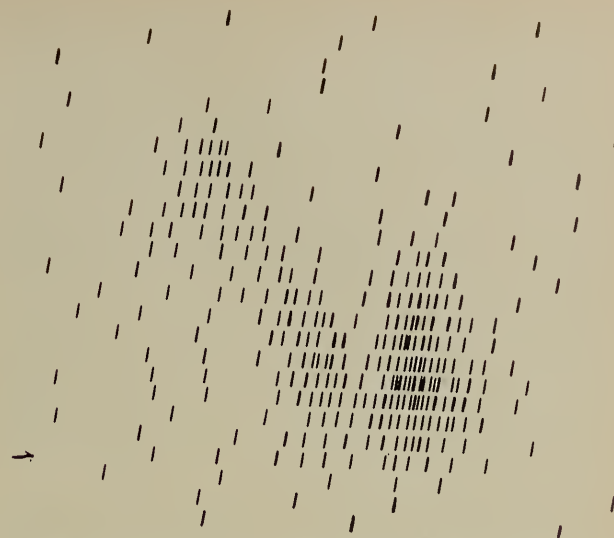


Figure 1.—Thyroid scintigram showing an area of decreased I^{131} uptake in a solitary nodule of the right thyroid lobe.

TABLE 2.—Follow-up on 34 patients with thyroid carcinoma

Status of patient	Number
<i>Living 24:</i>	
Alive 5 years or more.....	5
Follow-up less than 5 years.....	19
<i>Dead 10:</i>	
Died within 4 years.....	8
Died after 25 years.....	2

5, follicular adenocarcinoma in two, solid carcinoma in two, and mixed carcinoma in one.

Follow-up: (Table 2) In this series 24 patients are alive and ten dead. In the living group, five have survived five years or more; the follow-up studies on the remaining 19 have been in progress less than five years. In the latter group, eight (23 per cent of the 34 cases) died within four years following diagnosis. Seven of these eight are known to have died of thyroid cancer; the cause of death in the other one is uncertain; however, he had far advanced metastatic carcinoma when last observed. The other two patients in the latter group lived 26 and 29 years postoperatively and died of other causes. One of these two had persistent metastatic thyroid carcinoma at the time of his death.

Evaluating the effectiveness of therapy for thyroid cancer is difficult because the natural course of the disease varies so greatly.⁹ Occasionally patients survive many years without treatment, and hence assessment of the merits of various therapeutic methods is hazardous unless a long follow-up study is available. This is illustrated by the two patients who survived 26 and 29 years after institution of treatment. One was known to harbor metastatic lesions for several years, and yet he died of unrelated diseases.

Although the period of follow-up in many of the patients in this series was short, it was interesting

to compare the duration of survival of various patients with the type of treatment administered.

Relation to Early Treatment: Treatment was instituted within six months of onset of symptoms in 14 patients. There are twelve survivors in this group, but only two of them have been followed for five years. One patient died six weeks after biopsy of an obviously malignant goiter; another died 18 months after partial thyroidectomy and x-ray treatment for highly malignant mixed cell carcinoma.

Eleven patients received treatment between six months and five years of onset of symptoms. Eight of them are alive, but none of the cases have been followed beyond three years. The other three patients died within three years.

Six patients had symptoms longer than five years before receiving treatment. Five are alive, and three of them have survived beyond five years. One died of malignant disease.

In four patients the duration of symptoms before treatment could not be definitely established.

Relation to Type of Surgical Treatment: (Table 3) Four patients with far advanced thyroid carcinoma received no surgical treatment and died within three years. The diagnosis was established antemortem by biopsy.

Partial thyroidectomy was done in 13 patients. Ten of this group are alive, and of five followed five years or longer none had recurrence. The other three patients died within five years from recurrent carcinoma, solid in one case, giant cell in one, and follicular adenocarcinoma in the third.

Total thyroidectomy was done in seven patients. Although all are alive, only one has been observed for a period of five years since operation. In that case there has been no recurrence. Two patients with solid carcinoma developed metastases—to cervical and axillary nodes in one case and generalized in the other.

Thyroid lobectomy and radical neck dissection was performed on five patients. Four are alive without recurrence, but in only one case is the follow-up period more than five years. One patient died four years postoperatively of a metastatic solid carcinoma.

Five patients underwent total thyroidectomy and radical neck dissection. All are alive, but only one has been observed for as long as five years, and in that case a recurrence is now present in the neck.

The relatively small series reported in this paper reaffirms the observation that the great majority of cases of carcinoma of the thyroid occur in non-toxic nodular goiter. It has also been noted that the incidence of carcinoma is higher in patients who have nodules that are clinically solitary.^{3, 4, 6, 7, 11, 13} Because the morbidity and mortality of thyroidectomy is significantly lower than the possibility of

TABLE 3.—Relation of treatment to prognosis

Operation	No. cases	Alive		Died of carcinoma within 5 years
		5 year survivors	Follow-up less than 5 years	
None	4	0	0	4
Partial thyroidectomy.....	13	5	5	3
Total thyroidectomy.....	7	1	6	0
Lobectomy plus radical neck dissection	5	1	3	1
Total thyroidectomy plus radical neck dissection	5	1	4	0

TABLE 4.—Management of non-toxic nodular goiter and thyroid carcinoma

I. Preoperative work-up
1. Routine plus I ¹³¹ uptake study
2. Thyroid scintigram
II. Surgical treatment
1. Lobectomy—solitary nodule
2. Total thyroidectomy
a. Large lesions
b. Papillary adenocarcinoma
3. Radical neck dissection
a. Cervical nodes
b. Papillary adenocarcinoma
III. Postoperative I ¹³¹ studies
1. Scintigram of neck
2. Survey of entire body
IV. Treatment of metastatic lesions
1. Excision of accessible metastases
2. I ¹³¹ if lesion concentrates isotope
3. Roentgen therapy
V. Prolonged follow-up

nodular goiters harboring carcinoma (5 per cent as against 24 per cent) surgical intervention should be undertaken after detection of a nodular goiter. It seems logical that removal of such lesions should offer the patient a better chance of survival than would delaying until more obvious evidence of carcinoma had developed. The authors' concept of the most reasonable program of management for non-toxic nodular goiter and for thyroid carcinoma (see Table 4) is as follows:

A preoperative evaluation of the patient should include a radioactive iodine uptake study to determine functional activity of the thyroid gland. Then a thyroid scintigram should be made to outline any areas of increased or decreased concentration of the isotope. The presence of an area of decreased uptake in a thyroid nodule is suspicious of carcinoma; while an area of increased uptake offers considerable assurance against the presence of carcinoma in that area.

Lobectomy has been proposed as a reasonable approach to the initial management of solitary thyroid nodules.⁴ This has not been more technically difficult in the authors' experience than subtotal removal of the lobe. More important, lobectomy avoids the inadvertent transection of unrecognized neoplastic tissue, and in some instances this method provides adequate therapy for a small localized lesion of thyroid carcinoma.

Often it has been found that frozen sections do not reveal the exact histologic type, and on occasion do not establish definitely the presence or absence of neoplasm. In such instances precise diagnosis must wait for preparation of permanent sections.

If the pathological report shows benign thyroid tissue, hospitalization is terminated after recuperation from the operation. If the thyroid tissue is malignant, then further treatment must be considered.

Total thyroidectomy is indicated in cases of large malignant lesions or lesions involving the isthmus. In the majority of cases total thyroidectomy would appear to offer the greatest protection against local recurrence. The need for this is illustrated by the demonstration of multicentric foci or satellite tumor nodules within both lobes of the thyroid gland in some patients who have papillary adenocarcinoma. While it is entirely possible that such additional foci represent independent neoplastic sites, it appears more likely that they represent spread within the intraglandular lymphatic channels with which the thyroid is known to be richly supplied. Such a premise strongly recommends total thyroidectomy.

Total thyroidectomy also offers certain advantages in the employment of I^{131} . The total removal of functioning thyroid tissue enhances the affinity of metastatic thyroid carcinoma for the isotope so that I^{131} can be useful in the detection and treatment of such a lesion.

The indications for radical neck dissection for thyroid carcinoma are still somewhat uncertain. The authors believe that radical neck dissection is indicated in all types of thyroid carcinoma when cervical lymph node metastasis is detected and when metastasis is limited to the neck. Cervical lymph node metastasis is frequent in papillary carcinoma of the thyroid, and radical neck dissection therefore appears indicated when the primary thyroid neoplasm is of this type.⁵ Neck dissection should include resection of the sternocleidomastoid muscle and internal jugular vein. Ten of the patients in the present series had radical neck dissection; in five cases the thyroid lesion was papillary adenocarcinoma.

Postoperatively, radioactive iodine studies are obtained in four to six weeks. One of the most important uses of I^{131} in relation to carcinoma of the thyroid is the diagnostic detection of persistence of thyroid tissue following thyroidectomy. This can be accomplished by administering tracer amounts of I^{131} , sometimes preceded by thyrotropic hormone, and then obtaining a scintigram of the neck or suspected anatomical site. In three of six patients who had undergone total thyroidectomy residual thyroid tissue in the neck was demonstrated by means of such a test. When functioning thyroid tissue is not present in the neck, a survey of the entire body may be made. Such a survey is repeated at inter-

vals until metastatic lesions are detected or until the patient requires oral supportive thyroid treatment.

If solitary metastatic lesions are detected and are surgically accessible, they should be excised. The use of therapeutic doses of radioactive iodine in the treatment of thyroid carcinoma has been discouragingly limited because the malignant tissue usually does not concentrate I^{131} sufficiently to provide the degree of radiation required for lysis of the tumor. However it has been the authors' impression that radioactive iodine has provided palliation for some patients who had lesions that were not accessible to surgical removal. An evaluation of the use of I^{131} in this regard is in progress.² When lesions did concentrate the isotope, it appeared to be more effective than roentgen therapy; and it should be remembered that the use of radioactive iodine does not preclude the use of external irradiation.

Long-term follow-up studies will be necessary to evaluate any program of therapy because of the protracted course of many cases of thyroid carcinoma. Many years will elapse before a definitive appraisal can be made of the therapeutic methods now advocated.

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Acne Conglobata

Use of Cortisone and Corticotropin in Therapy

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ACNE CONGLOBATA is a disease characterized by the presence of cystic abscesses, confluent follicular and perifollicular inflammations and intercommunicating cysts. These lesions affect primarily the face, neck, chest and shoulders and are the cause of serious and disfiguring scars. Patients with this disease are usually from 15 to 25 years of age and have an antecedent history in most cases of acne vulgaris of varying degrees of severity.

Acne conglobata may have a fulminating onset and course. Conventional therapy, consisting of antibiotics, local measures and roentgen irradiation, is frequently disappointing. Because of the explosive nature of the lesions and the seemingly disproportionate scarcity of bacterial infection in them, the possibility of underlying Arthus or Shwartzman reaction was considered. On this presumption, the authors administered cortisone and corticotropin to six patients with acne conglobata.

The patients ranged in age from 13 to 18 years. Four were male and two female. A cardiolipin blood test for syphilis was done in all cases and in all the results were negative. The total number of leukocytes in the blood was within normal limits in all cases, as were the differential leukocyte count, hemoglobin content, sedimentation rate, urinary 17-ketosteroid determinations, basal metabolic rate, serum cholesterol and results of urinalysis. No abnormalities were noted in x-ray films of the chest. In five cases staphylococci grew on cultures of purulent exudate from the cysts, and in one the culture was sterile. Antibiotics were employed and the agent used in each case was the one to which the organism was found to be most sensitive as determined by sensitivity studies.

CASE 1. An 18-year-old male who had had acne vulgaris for four years, had explosive onset of acne conglobata in July 1953. Papules, pustules and intercommunicating cysts 1 to 2 cm. in diameter involved the chest, face and upper back. Previous intensive therapy had been relatively unsuccessful.

Treatment consisted of daily intravenous infusions of 40 units of corticotropin (ACTH) in 500 cc. of

• Six patients with acne conglobata were treated with cortisone and adrenocorticotrophic hormone. Definite immediate improvement was observed in all of them. In three cases control of the disease was maintained on relatively low doses of steroid. In one case there was response to superficial x-ray therapy after the acute phase of the disease had subsided in response to steroids. Resistance to steroid therapy apparently developed in one patient after approximately 18 months of treatment. One patient responded to treatment and then remained well (for two months when last observed) although steroids and all other treatment were discontinued.

The combined use of antibiotics and steroids in the patients treated gave the best results.

5 per cent dextrose in distilled water. Definite improvement was noted within two days. The patient was discharged from the hospital one week after admission, greatly improved. Relapse occurred after dismissal from the hospital. At the time of report, therapy consisted of 40 units of corticotropin gel given intramuscularly two times a week, supplemented with achromycin by mouth. The lesions again were reduced in size and the general appearance of the patient was improved.

CASE 2. A 16-year-old girl who for three years had had acne vulgaris, had explosive onset of acne conglobata. There were many papules, cysts, pustules and keloid-like lesions on the face, back and chest. Therapy carried on over a four-month period was unsuccessful. Prompt response was noted within 72 hours after three daily intravenous infusions of 20 units of corticotropin in 500 cc. of 5 per cent dextrose in distilled water. The patient was also given 2 gm. of terramycin daily.

She was discharged from the hospital after five days, considerably improved. A mild exacerbation occurred two days after leaving the hospital.

CASE 3. A 13-year-old girl had acne vulgaris for six months prior to an explosive onset of acne conglobata involving the face, chest and shoulders. Previous therapy had been relatively unsuccessful. Administration of 75 mg. of cortisone and 1 gm. of aureomycin by mouth daily was begun. Improve-

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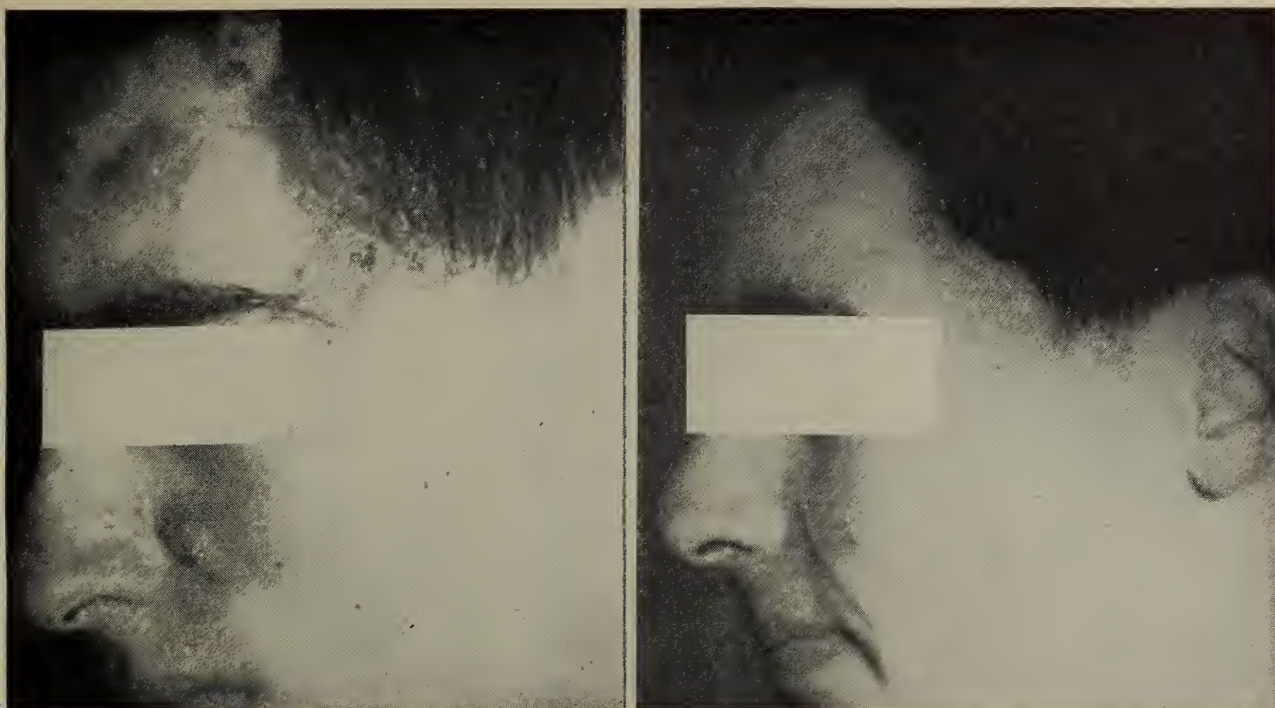


Figure 1.—*Left*, cystic and keloid lesions of the face (Case 6) before steroid therapy. *Right*, after steroids were added to treatment for a period of two weeks.

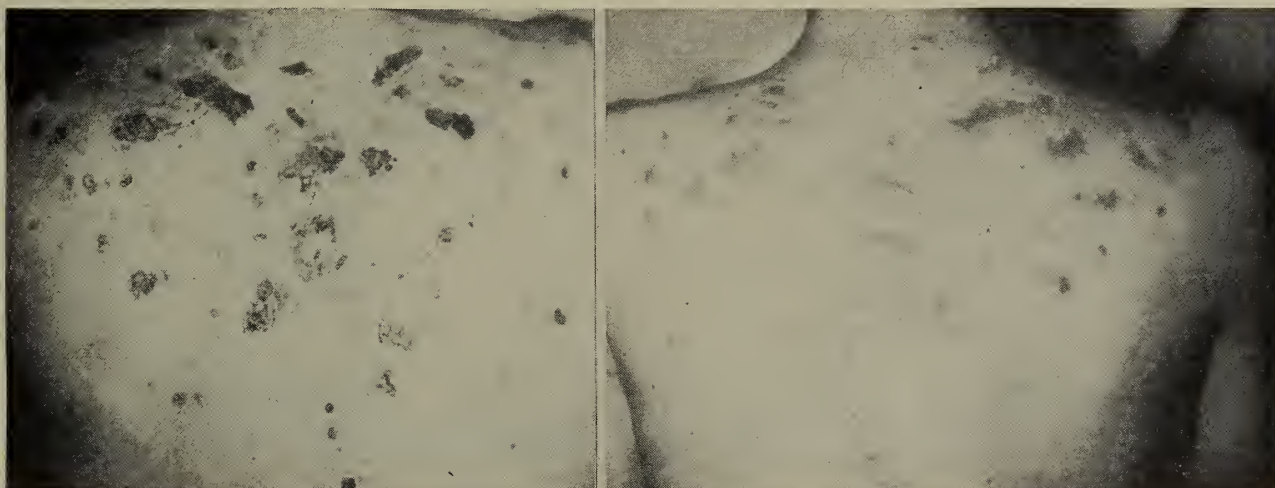


Figure 2.—*Left*, crusting and hypertrophic scars on back (Case 6) before addition of steroids to therapy. *Right*, after two weeks of steroid therapy.

ment was noted after five days and was maintained for six weeks. On discontinuance of the therapy there was mild exacerbation of the lesions.

CASE 4. A boy 18 years of age had acne vulgaris for six years, when an explosive onset of acne conglobata occurred. All previous therapy had been unsuccessful. Many pustules, pitted scars, keloids and cysts were noted on the upper back, chest and face.

Treatment consisting of 150 mg. of cortisone given daily for six days by mouth resulted in definite improvement, in that the cysts decreased in size and no new ones appeared.

CASE 5. A 14-year-old boy who was examined in the Stanford University outpatient clinic in July

1952, had had acne vulgaris for one year. In March of 1952 acne conglobata developed explosively over the face, chest and upper back. Numerous pustules, cysts and intercommunicating keloid-like lesions practically covered the face. Previous therapy, including superficial x-ray treatment, had been unsuccessful. The patient was hospitalized and given 200 mg. of cortisone daily and 500 mg. of erythromycin four times daily. There was response to therapy within 48 hours, manifested by flattening of the cysts and a decrease in the number of pustules and keloids.

The patient continued to improve for the next four months while doses of cortisone and terramycin were gradually reduced. Additional x-ray therapy

was administered with heavier filtration and the disease remained under control for the next ten months. An exacerbation occurred in December 1953 and the patient was hospitalized and given 40 units of corticotropin in 500 cc. of 5 per cent dextrose in distilled water intravenously over an eight-hour period. Improvement was slight but definite and the patient was discharged from the hospital after one week. Administration of cortisone, 75 mg. daily, and erythromycin, 600 mg. daily, was continued. New lesions developed after discharge from the hospital and apparently resistance to the therapeutic effects of the steroid had developed.

CASE 6. A 15-year-old boy had acne vulgaris for six months before an explosive onset of acne conglobata occurred. There were many hypertrophic crusted lesions, depressed scars, keloids and fluctuant cysts on the back, central portion of the chest, face and scalp. Corticotropin gel (30 units) and terramycin were administered in addition to local therapy in the form of hot compresses. The patient was discharged from the hospital, considerably improved, after ten days of this therapy. The medication was gradually withdrawn and, when observed two months later, the patient had been asymptomatic without treatment of any kind.

DISCUSSION

There were certain common factors in the six cases here reported. The patients were between the ages of 13 and 18 and all had acne vulgaris before the development of acne conglobata. All had improvement within two to six days after steroid therapy was begun. The rate of response appeared to be influenced by the route of administration of the drug—earlier when given intravenously than intramuscularly or orally. The route of administration was determined by the severity of the disease process. It was further significant that staphylococcae were cultured from exudate in five of the six cases.

Although the influence of adrenal cortical hormones upon hypersensitivity is still in the early stage of evaluation, it seems inevitable that studies of these agents will reveal basic fundamental information concerning the immunological and hypersensitivity states observed in clinical medicine.⁵

The mechanisms involved in the use of cortisone and adrenocorticotrophic hormone in hypersensitivity reactions are poorly understood. In rabbits antigen-antibody union is blocked if steroids are given in massive dosage. There does not appear to be a human counterpart, for the small dosage which is

clinically effective in man does not consistently inhibit or suppress antibody formation. Furthermore, if preformed antibody is given, it disappears too slowly to explain the dramatic clinical improvement observed early in patients who receive steroid therapy.³ Conversely, antibodies produced by previous vaccination have been shown to decrease by as much as 25 per cent under the influence of cortisone.¹ This would suggest that there is a suppression of antibody formation.

"It is not completely clear why the passive Arthus phenomenon is unaffected, whereas in the Schwartzman phenomenon, a histologically similar reaction, the effects of the preparatory dose of toxin induces an unusually severe reaction whereas the second, or challenge dose of toxin, is inhibited."³ Neither has blood vessel damage, which is believed to be a constant change in hypersensitivity reactions, such as the Arthus and Schwartzman phenomena, been exhibited in biopsy specimens from any of the cases observed by the authors.

When administered in therapeutic doses cortisone suppresses adrenal cortex activity by inhibiting pituitary adrenocorticotrophic output.⁶ The urinary 17-ketosteroid determinations usually reflect a decrease in androgen secretion,⁴ especially in females. In the six patients in the present study the values for urinary excretion of 17-ketosteroids were normal before and during steroid therapy.

Although it is impossible in the light of known experimental data to explain the improvement noted in the cases here reported upon, it was probably owing to the steroids, especially when the dramatic response to treatment and the exacerbations upon discontinuance of such therapy is considered.

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Proctologic Disorders in Sex Deviates

A Study of Sixty-eight Cases of Sodomy

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ALTHOUGH SODOMY (anal intercourse) has been referred to for centuries in historical and biographical writings, the medical literature on this subject is relatively scanty. A number of case reports on transvestism,^{9, 10, 17} rectal venereal disease^{7, 12, 18} and the medicolegal aspects of sodomy^{8, 11, 14} have appeared within the past 25 years, mainly in European and South American journals. In the United States, recent literature on the subject is predominantly psychiatric and sociologic.^{1, 4, 6, 20} No study of the total proctologic problem resulting from the practice of sodomy was discovered.

It is the purpose of this paper to report on a study of 68 persons who practiced passive sodomy—their histories, methods of practice, and proctologic disorders—and to emphasize the special problems for physicians in examining and treating such patients.

MATERIAL AND METHODS

Fifty-inmates of two penal institutions of the California State Department of Corrections and 18 patients observed in private practice provided the clinical material for this study.

Group I—Inmates

This group was made up of 50 homosexual inmate volunteers at two California state prisons who admitted to having practiced passive sodomy before imprisonment. Forty-two of the group were white and eight were Negro. The age range was from 20 to 38 years, with a mean of 27 years. All in the group were assured that the information they gave would remain confidential and that no findings that might serve as a means of identification would be used. They were studied by personal interview and proctologic examination.

*Interview.** The questions asked about the individual experiences with sodomy dealt with age at the time of initial practice, average frequency, the immediate effects on the anus and rectum, and the techniques employed. In addition to providing information on the practice of sodomy, the answers were to be correlated with proctologic findings. Individual opinion as to the quality and accessibility of medical care before imprisonment was solicited. Estimates as to the prevalence of sodomy in the

• *Sixty-eight patients, 50 of them in penal institutions, who practiced passive sodomy were studied by interview and examination with regard to type of homosexuality, appearance, age at onset, frequency of practice, techniques, and proctologic findings.*

A high incidence of anal cryptitis was observed. A sign observable on digital examination, possibly peculiarly indicative of the practice of sodomy, was noted in many cases. Particular care is needed in the examination and treatment of anorectal diseases in sodomists and certain precautions must be taken as to hospital accommodations.

general public were obtained. From the answers to the foregoing questions, and from subjective impressions, an arbitrary division as to the type of homosexual in the group was made as follows:

Type A—Normally masculine in appearance and manner, with occasional homosexual contact.

Type B—The so-called bisexual, who usually but not always assumed the active role in sodomy and was confused as to his homosexuality.

Type C—Sexual relationships exclusively homosexual; admitted being homosexual, and more or less adjusted to it.

Type D—Homosexual who tried to dress and live as a female.

Proctologic Examination. Each patient was given a proctologic examination which included proctologic history and a physical examination consisting of external inspection and digital and anoproctoscopic examination. Smears and photographs were taken when indicated.

Group II—Private Patients

This group consisted of 18 patients observed in private practice—16 males and two females—who were presumed to have practiced passive sodomy. Although the interviewing technique used with Group I was not suitable for this group, the same classification as to type of homosexuality and effeminacy of appearance was employed. The group was studied by proctologic examination, and the problems of treatment were reviewed.

* All questions concerned period before imprisonment.

Proctologic examination. This included a proctologic history, listing of chief complaints, inspection, digital and anoproctoscopic examination, and laboratory tests when indicated.

RESULTS

Group I.

Interview. The distribution of homosexual types was: Type A, 19; Type B, 7; Type C, 17; and Type D, 7. The age at which sodomy was first practiced ranged from 6 to 22 years, with a mean of 14.5 years. Frequency varied from a rare experience to ten times a week, one patient admitting to a continuous frequency of two times a week for 17 years. Six patients said that they were forced into the initial experience, which they recalled as having been extremely painful. All patients reported having tried various methods of homosexual outlet. Ten said that they practiced sodomy only. Twelve preferred sodomy but practiced other methods as well. Fifteen practiced sodomy occasionally, usually for the purpose of pleasing the active partner, and 13 practiced it rarely finding it painful or unpleasant. Six patients admitted having assumed both the active and passive roles, but each of them had a preference for one or the other role. Sixteen expressed a preference for a "normal" male as a sexual partner; the remaining 34 established and maintained sexual relationships only with other homosexuals. Twenty-two of the group reported either a lack of pleasure or actual discomfort in the practice of sodomy. Seven experienced a slight pleasurable sensation, seven attained occasional orgasm, and 14 had orgasm frequently. Of the latter, half used additional friction to the genitalia to attain sexual outlet.

Rectal masturbation was admitted by three. The remaining 47 found the anus erogenous only when in contact with another male. Those who masturbated described the use of sausages, brush handles and rolled-up magazines, to name a few of the many items mentioned. Massage of the "gland" was depicted as the goal. One patient complained of getting an erection during defecation, especially when the stool was hard; when the evacuation was large, defecation would be accompanied by a seminal emission. Only two patients admitted to coprophiliac tendencies; the remainder expressed disgust with the presence of fecal material on the skin, and with fecal odors.

The estimates of this group as to the prevalence of sodomy in the general public varied from 2.5 per cent to 20 per cent who practiced it frequently and 10 to 60 per cent who practiced it occasionally. It was estimated that 40 to 50 per cent of all male homosexuals practice sodomy exclusively or frequently; that almost all homosexuals have tried passive sodomy at one time or another; that the

practice of sodomy was more prevalent in large cities and uncommon in small towns, and that it was more prevalent on both coasts of the United States than in the Middle West. Several of the college graduates in the group claimed that sodomy was preferred to other methods by the more sophisticated homosexual.

The majority of the members of this group had never consulted a physician before imprisonment. Many expressed fear of unsympathetic treatment and revulsion on the part of the physician. Many attempted to appear heterosexual in their daily contacts and were afraid that a consultation with a physician would lead to exposure. A number accused physicians of lecturing about "going straight." They found this particularly objectionable.

From the 50 interviews a pattern of performance emerged. Generally speaking, the performance of sodomy was described as follows: The passive partner usually washes out the rectum by means of an enema or, if this is unavailable, attempts to empty the rectum. He may prefer to lie on his back, side or abdomen. A lubricant, usually petroleum jelly, is applied to his anus and to the penis of the active partner. Penetration is often associated with slight pain, which is aggravated by hasty insertion or disproportion in the sizes of the two organs. After ejaculation is attained by the active partner and the penis is withdrawn, the passive partner again empties the rectum.

Many of the patients said they experienced pain, bleeding and a sensation of looseness and gas-incontinence for a period of one-half hour to several days following sodomy. Three patients described such a syndrome as an "upset," which they apparently related to menstruation in the female, and during which sanitary napkins were worn and intercourse temporarily avoided.

Proctologic Examination.

History. While almost every member of the group stated that sodomy acted as a temporary laxative, only nine had any disturbance in bowel habit: six complained of constipation, two of irregular evacuation, and diarrhea occurred in one patient who had a rectal stricture caused by lymphopathia venereum. Those who practiced sodomy frequently stated that there was a definite increase in the total number of daily bowel movements during periods of increased sexual activity. Six patients gave a history of previous rectal operation, hemorrhoidectomy in five cases and fissurectomy in one. One was 15 years of age at the time of operation, one 17, two 18, one 20 and two 25. One patient received injections for hemorrhoids, and one was given a prescription for suppositories.

Twenty-two men had definite complaints referable to the rectum. These included, "piles," 9; painful

evacuation, 4; wetness, 3; itching, 2; incontinence as to gas, 2; bleeding, 2; tightness, 1.

Inspection. Skin tags were noted in six cases, condylomata acuminata in four, visible, prolapsing hemorrhoids in three, external thrombus in one, visible skin erosion in one and fungating neoplasm in one. It was not possible to relate the appearance of the anus to the practice of sodomy; there was no appreciable difference in the appearance of the anus in those who practiced sodomy frequently and those who practiced it rarely. One possible exception was a transvestite who trained the growth of the perianal hair. One patient who had anal skin tags felt that they resembled labia, but they were small, ordinary anal skin tags.

Digital. The digital examination revealed an interesting, possibly diagnostic sign. It appeared in 30 cases and it seemed that there was some relationship between the extent of indulgence in sodomy and the degree of this sign. As the examining finger entered the anal canal, there was a sudden, brief contraction of the sphincters, causing resistance to penetration at the intermuscular septum. This was immediately followed by pronounced relaxation of the musculature of the anal canal, which then appeared widened. The examination resembled the digital examination that is done after saddle anesthesia and before beginning anorectal operation. When the sign is present, the anoscope can be passed with no resistance. If the sign is indeed due to the mechanics of sodomy, it would probably be encountered in rectal masturbators as well. Two patients could voluntarily relax the anal canal musculature.

More extensive digital examination was difficult, especially when contact with the prostate was made, for this brought embarrassing and unpleasant reactions in the patient, especially those of the more effeminate type.

Anoproctoscopic examination. Anoscopic and proctoscopic examination were accomplished with some difficulty because of the physical and psychological responses induced by the passing of the instruments. Internal hemorrhoids were found in 17 cases—small in three cases, moderate in nine, large in two, and prolapsing in three. There were four cases of hypertrophic anal papillae, two of blind fistulae and two of anal ulcer. The most remarkable finding was the high incidence and degree of cryptitis. Definite cryptitis was present in 26 cases and in eight cases it was pronounced or severe. The crypts involved were generally deep and unusually wide, and the color of the overlying tissue was darker than normal. Smears of exudate taken from the lesions in the severe cases were negative for gonococci.

One patient had a typical lymphopathia stricture. Result of a Frei test for lymphogranuloma was positive. Since he was a homosexual of Type D, prefer-

ring sodomy, his sexual activity was limited. Nevertheless, in 1950, when first observed, he refused treatment, hinting that he was attempting to dilate the stricture. He died in 1952 of a fungating squamous carcinoma of the anus, which was inoperable when he finally sought treatment.

The proctologic findings in Group I were brought to the attention of the medical authorities only when the specific inmate so requested. The medical facilities in the state penal institutions are excellent, the equipment modern, the staffs well trained, and any inmate having rectal complaints can get treatment if he wishes.

Group II (16 Men, 2 Women)

The males were for the most part only slightly effeminate in appearance, and several seemed quite masculine. The average age was 29.7 years, as compared with an average age of 39.3 for 100 unselected patients with proctologic disease in the same practice. History-taking, while successful in eliciting proctologic complaints, was difficult when applied to homosexuality. Once they had overcome an initial suspicion, some patients were willing to discuss their sexual problems; others would admit only to being homosexual and would answer no more questions. Several ascribed occasional homosexual lapses to alcohol.

Proctologic history. The complaints were usual for the findings. An unusual number of complaints referred to condylomata acuminata.

Inspection. The following pathologic conditions were noted: condylomata acuminata on the perianal skin, seven cases; visible protruding hemorrhoids, three cases; secondary opening of a fistula, two cases; anal ulcer, two; erosion of the skin, two; abscess, one; sentinel tag, one; oxyuriasis, one.

Digital examination. The digital sign previously mentioned was present to some degree in most of the males.

Anoproctoscopic examination. The following conditions were noted: Internal condylomata acuminata, 3 cases; hemorrhoids, 5; anal fissure, 2; fistula, 4; oxyuria infestation, 2. Nine patients had cryptitis similar in type and severity to that seen in patients in Group I. One of the women in the group had severe purulent proctitis, presumably related to a positive smear for gonococci, and the other had a traumatic ulcer in the anal canal that resembled a fissure but was not related to a crypt infection.

Laboratory. Gram-negative intracellular diplococci were noted on smears in four cases. In two cases these organisms were associated with condylomata acuminata, in one with hemorrhoids and cryptitis, and in one (previously described) with the proctitis. Except for the latter case, there was no clinical evidence of gonorrhea in the anorectum. In one

case in which the smear was positive, the last contact had taken place four weeks before the examination. In two cases adult oxyurids were seen, and the Scotchtape tests were positive. Results of Kahn tests for syphilis were negative in all but one case; and in that case, old and previously treated, the reaction was 1 plus.

Problems of treatment. Operation was done in nine cases. Office treatment was administered in the others. Just as tact and patience were required in history taking, gentleness and consideration were necessary in the physical examinations. Most of the patients were somewhat tense and embarrassed. Their reactions to the examinations were sometimes feminine in quality. They disliked disrobing in front of others, including nurses, hospital aides or other doctors. The passage of the examining finger and of instruments was more of a trial for them than for heterosexual persons. They expressed great concern about the physical condition of the anorectum. Those who were operated upon recovered in normal fashion. Special care was taken not to put the more effeminate in large wards with other men, although some got along well in two-bed or three-bed wards. They were anxious to conceal their homosexuality because most of them held good positions and conducted themselves normally in the average social situation. Enemas and over-meticulous rectal preparation were avoided, and care was taken that no derogatory remarks were made by the nurses or members of the staff. Almost all the patients were easily dealt with and went through hospitalization without their homosexuality being recognized.

DISCUSSION AND CONCLUSIONS

There were so many clinical and sociological variables in this study that no unqualified conclusions can be drawn. However, it seems probable that sodomy is more prevalent than is ordinarily believed. Although the estimates made by the subjects in Group I of the number of homosexuals in the general population are undoubtedly high, the consensus that a large percentage of all homosexuals practice sodomy is significant. Statistical studies made by Kinsey, Pomeroy and Martin⁶ indicated that a relatively large number of the male white population have had some overt homosexual experience. Summarizing data on the incidence of overt homosexual experience in the white male population and the distribution of various degrees of heterosexual-homosexual balance in that population, they made the following generalizations: "Thirty-seven per cent of the total male population has at least some overt homosexual experience to the point of orgasm between adolescence and old age . . . 18 per cent of the males have at least as much of the homosexual as the heterosexual in their histories for at least three years be-

tween the ages of 16 and 55 . . . 10 per cent of all the males are more or less exclusively homosexual for at least three years between the ages of 16 and 55 . . . four per cent of the males are exclusively homosexual throughout their lives after the onset of adolescence." If, as is indicated, a considerable percentage of these homosexuals indulge in sodomy, the practice of sodomy is obviously widespread. From the present study it would also seem that sodomy is not confined to the white race, the Negro members of Group I having estimated similar frequencies for the Negro race. There is also evidence that sodomy is not uncommonly practiced by children.^{15, 16, 19}

It has also been held that passive sodomy is always unpleasant. Kinsey and co-workers¹³ said that "among males who had been stimulated anally in the homosexual, there were only a few who were particularly aroused and only an occasional individual brought to orgasm by such techniques." The present study would indicate that orgasm is quite frequently attained by passive sodomists, especially those who confine their sexual activity to sodomy.

The appearance and behavior of homosexuals in public varies, from the completely masculine-appearing athlete to the complete transvestite. Those observed in private practice are more likely to be only slightly effeminate and to behave normally. Some of them marry for the sake of appearances.

The practice of sodomy often gives rise to immediate anorectal disturbances of a relatively mild nature, as a consequence of the mechanics of the act. In many instances it is practiced with no apparent immediate ill effects. The ordinary anorectal diseases occur in these patients at a higher than average frequency than in heterosexuals of the same age. The large percentage of cases of cryptitis would indicate a high future incidence of those diseases attributed to crypt infection—fissure, abscess and fistula—in these patients.

Patulous anus, contrary to a commonly held impression, was not observed in the patients in the present study. Only two patients complained of continued gas incontinence. Control of bowel movements was apparently unaffected, but there was some change in muscle behavior as shown by the digital sign. Excess rectal intercourse may cause a short period of "looseness."

Much has been written about venereal disease of the anus and rectum.^{12, 15, 18, 19} The anal canal may be the site of chancroid, granuloma inguinale, syphilitic chancre and condyloma lata, and the anorectum may be involved in gonorrhea and syphilis. Bensaude and Lambling² described 96 male patients with lymphopathia venereum of the rectum; 82 of these patients confessed to passive sodomy. The presence of condylomata acuminata may indicate the presence of gonococci in the rectum with or without other symptoms. The finding of venereal disease in the male

anorectum may be considered presumptive evidence that the patient has practiced sodomy. Likewise, venereal disease should be looked for in all sodomists.

This study thus indicates that a considerable group of individuals practice passive sodomy and will require proctologic attention, whether in institutions or in the outside world. Likewise a considerable number of homosexuals who do not practice sodomy will develop anorectal disease. A physician's responsibility in these cases is one of diagnosis and treatment. Possible alteration of the degree of homosexuality should be left to psychiatrists. It is important that proctologists learn to recognize the homosexual, understand his problems and employ the tact and skill which will make the examination and treatment successful.

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Unusual Abdominal Cysts in Infants and Children

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INTRA-ABDOMINAL CYSTS, which always pose interesting diagnostic and therapeutic problems, occasionally are encountered in infants and children. This presentation will review abdominal cysts observed in 47 infants and children at the Los Angeles Children's Hospital from 1935 to 1954. Although these intra-abdominal cysts may form one clinical group, they should be evaluated in four pathological categories: (1) ovarian, (2) mesenteric and omental, (3) enteric, and (4) pancreatic cysts.

Of the four kinds, ovarian cysts were observed most often in the present series. Such lesions were seen in 22 cases, which was an incidence of one in 4,800 admissions and of one in 926 general surgical operations. The age range of patients was from three days to thirteen and a half years. Eight of them were 12 to 13 years old, and four of the eight had reached the menarche. Histopathologically there were five groups of ovarian cysts, as follows:

	No. of Cases	Per Cent of Total
Simple	11	51
Dermoid	4	18
Teratoma	5	23
Granulosa cell	1	4
Paraovarian	1	4

They occurred on the right side in 12 patients, on the left in seven, and bilaterally in the other three patients. Two patients with unilateral involvement had multiple cyst formation. Most cysts had a thin wall and contained fluid which was serous in all except dermoid cysts, in which it was creamy. Most were pedunculated.

Torsion of the pedicle occurred in 14 patients. In those cases, owing to strangulation and necrosis, the microscopic details were often obscured. In the cases with torsion, the symptoms were acute and of four days' duration or less.

The signs and symptoms in the group with ovarian cyst were as follows:

	No. of Cases	Per Cent of Total
Pain	20	91
Mass	17	77
Tenderness	14	64
Distention	13	59
Vomiting	11	50
Fever	9	41
X-ray evidence	{ 9 of the 16 cases in which x-ray examination was made	

Part of a Symposium on Pediatric Surgery presented before the Section on General Surgery at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

• In a 20-year period at the Los Angeles Children's Hospital, 46 infants and children have had operation for cysts within the abdomen. The age range of patients was from newborn to 13 years. Most of them were under four years old. There were four general groups of these cysts. (1) About one-half were cysts of the ovary, some of them serous and some dermoid. These cysts are attached by a stalk that often twists, causing gangrene or rupture with acute symptoms simulating appendicitis. (2) Next in frequency were cysts arising in the mesentery of the intestine. They usually caused little trouble until by their size (up to a 2-quart capacity) they created pressure and obstruction in the intestine. (3) Enteric cysts were found in four patients. (4) Cysts of the pancreas were present in three of the children.

X-ray examination was helpful in diagnosis. Usually the type of cyst was not determined until operation was done. Transection of the intestinal tract sometimes was necessary for removal of the cyst. Surgical correction was satisfactory in 44 of the 46 cases.

In the infant with the granulosa cell cyst there were signs of sexual precocity. In four of the nine cases in which x-ray evidence of a mass was noted, bone or tooth formation was evident. Correlation of leukocytosis with the pathological findings was possible only in the two cases in which rupture of the cyst occurred. There was history of previous trauma in two patients. One had had appendectomy for appendicitis four years previously, and the other had had inguinal herniorrhaphy two years previously, at which time a grossly normal ovary was found prolapsed into the hernial sac. Therapy in all cases was surgical removal, by salpingo-oophorectomy in 15 cases, by oophorectomy in five, and by cyst excision in two. Complications occurred in three patients with torsion of the mass. One of them (in 1937) had rupture of the cyst with peritonitis, wound dehiscence and secondary hemorrhage. She died. Of the other two, one had abdominal wound dehiscence and the other an episode of dynamic ileus. Both recovered. Thirteen patients were reexamined after elapse of varying periods after operation and nine of them were well without evident sequelae after 25

to 117 months, and the other four were well when examined one to ten months postoperatively.

Next most common in the present series were mesenteric and omental cysts. There were 18 patients with such lesions, 13 with mesenteric and five with omental cysts. The age range was from one week to six years. Ten of the patients were boys. In four cases the cysts had chylous contents. Of the five omental cysts, three were simple serous cysts, one was a teratoma and one was a degenerative sarcoma. Ten of the mesenteric cysts were situated between the leaves of the small bowel mesentery, and the other three were in the transverse mesocolon. Four of the omental cysts were in the greater omentum, and the other was in the lesser omentum. Multilocular cyst formation was present in the four patients with chylous cysts, in three patients with serous mesenteric cysts and in four patients with omental cysts. All cysts were large—having a capacity of 100 cc. to 2,000 cc. Two were hemorrhagic. Torsion occurred in two cases and in one case there was 360 degree volvulus of the jejunum.

There were no characteristic clinical manifestations. Most of the patients were asymptomatic until progressive enlargement of the cyst caused abdominal distention or pressure on other viscera. When the peritoneal reaction from pressure and necrosis was more severe, symptoms became acute, as in ten patients who had pain, tenderness and fever as prominent features. The clinical manifestations in 17 cases were:

	Twelve Cases of Mesenteric Cyst	Five Cases of Omental Cyst
Symptoms acute	11	1
Vomiting	10	2
Pain	8	4
Distention	7	4
Fever	7	2
Mass	3	2
Tenderness	6	2
Diarrhea	4	1
X-ray evidence	7	3

Surgical excision was feasible in 15 of the cases and included resection of the small bowel in two patients. In two instances, excision of a mesenteric cyst was impractical; marsupialization was carried out and after drainage for six to eight weeks there was no further complication. The patient with a sarcoma died in one year. The patient with associated bowel volvulus with diffuse damage, twice had bowel resections and abdominal drainage performed for peritonitis from a fistula, and died 27 days postoperatively. Nine patients who were reexamined were observed to be well three months to eleven years postoperatively.

Third in incidence in the series were enteric cysts (sometimes called enterogenous cysts or enterocystoma or duplication of the intestine).

In the series there were four patients with enteric

cysts. The age range was from eight months to four and a half years. Two of the patients were boys. One cyst was ileal, two cecal and one rectal in location. The cysts varied from 5 cm. to 12 cm. in diameter except for the huge rectal cyst which extended into the left upper quadrant. The rectal cyst contained feces, the others mucus. The clinical manifestations were those of gastrointestinal dysfunction. Symptoms were acute in three patients with pain and vomiting, and with associated fever in two, and tenderness in two patients. Distention was present in all cases. In two there was a palpable mass and in one of the others a mass was visualized by x-ray. The ileal and rectal cysts were excised. In one of the two cases of cecal cyst, bowel resection and ileo-transverse colostomy were carried out; in the other, treatment was by cauterization of the lining. All patients did well postoperatively. The patient who had the huge rectal cyst still had fecal incontinence after operation. The others were free of symptoms when last observed, three to fourteen and a half years postoperatively.

Three patients had pancreatic cysts, a true cyst in one case and pseudocysts in the two others. The patients were girls, two of them 15 months and one nine and a half years of age. The principal symptom was abdominal distention owing to the size of the cyst. Two patients had diarrhea and two a palpable mass. The oldest girl (who had a true cyst) had had previous episodes of acute pancreatitis proved by laparotomy, biopsy and biochemical studies. Twenty-one months before operation for the cyst, the patient had a glucose tolerance curve diabetic in type, and postoperatively the curve returned to normal. One infant had four plus albuminuria. In all cases the mass was observed in x-ray films and the site determined with the aid of contrast media. In two cases the cyst was in the lesser sac. One had a capacity of 2,200 cc. and the other of 3,500 cc. In the third case the cyst was pedunculated and contained 140 cc. Treatment was excision in two cases; and in the other, that in which the lesion was a true cyst, cystjejunostomy with jejunojejunostomy were carried out. Postoperatively a temporary ileus and wound abscess developed in one case. All the patients remained asymptomatic for 35 to 99 months after discharge from the hospital. In the girl who had cystjejunostomy, no evidence of cyst was observed in upper gastrointestinal x-ray studies.

DISCUSSION

In none of the four groups of intra-abdominal cysts were the clinical manifestations pathognomonic. The varying symptoms that did occur were usually due to the size of the cyst and its location in a site where it affected the function of the gastrointestinal

tract. The incidence of the various symptoms in the combined group of 47 cases was as follows:

	No. of Cases	Per Cent of Total
Acute symptoms	29	62
Pain	36	77
Distention	31	66
Mass	26	55
Tenderness	24	51
Vomiting	27	57
Fever	21	45
Diarrhea	10	21
X-ray evidence	23	49

Ovarian cysts usually had clinical manifestations that were acute due to torsion and infarction. (Rupture of the cyst occurred in two cases.) Only two other cysts underwent torsion, one of the mesentery, and one of the omentum. Most mesenteric cysts had acute manifestations due to bowel compression. The

patients with pancreatic cysts had mild chronic symptoms, and one had had previous episodes of acute pancreatitis.

A mass was evident in 42 of the 47 patients in the series (89 per cent) either by palpation or by x-ray. Diagnosis was made correctly on admission in 12 cases; but, in addition, cyst of an unclassified type was diagnosed in three others, and diagnosis of abdominal mass of a nature not specified was diagnosed in six other patients, making a total of 21 cases (45 per cent) in which a workable diagnosis was made before operation. Diagnoses, other than the correct one, commonly entertained were renal disease, ileus, acute appendicitis, and ascites. Diagnosis usually was not determined until laparotomy was carried out.

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CASE REPORTS

- **P. Vivax Malaria**
- **Falciparum Malaria**
- **A Complication of Pyloromyotomy**
- **Sarcoidosis**

P. Vivax Malaria

A Case with Anemia, Cardiomegaly, Hepatomegaly and Renal Involvement

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PLASMODIUM VIVAX MALARIA is a protean disease. Signs and symptoms mimicking those of acute and chronic diseases involving the liver, spleen, kidneys, blood, gastrointestinal tract, brain and respiratory system have been reported.⁵ In the present case, anemia, hepatomegaly, cardiomegaly and renal abnormalities were present.

CASE REPORT

A 29-year-old white man was admitted to Letterman Army Hospital on June 25, 1953, with diagnosis of malaria. He had served in Korea from July until December 1952, at which time he had suppressive antimalarial therapy and was evacuated because of injury to the right thumb, which had to be amputated. He was well until mid-June 1953, when he began noting gradual development of undue fatigue on moderate exertion, malaise and mild swelling of both ankles. A week later there was sudden onset of severe chills, fever, headache, low backache and mild nonproductive cough.

Upon physical examination the patient appeared to be fairly acutely ill. Oral temperature was 102.4° F., the pulse rate 96, respirations 22 per minute and the blood pressure 130/84 mm. of mercury. The skin, mucous membranes and nail beds were pale. The lungs were clear to percussion and auscultation. A Grade I pulmonary systolic murmur was present. The liver edge, which was palpated three finger-breadths below the right costal margin in the mid-clavicular line, was smooth and slightly tender. Slight pitting edema of the ankles was noted.

The hemoglobin content of the blood was 8.1 gm. per 100 cc., the packed cell volume was 26 per cent of the whole blood, the erythrocyte sedimentation rate was 21 mm. in one hour (Wintrobe method) and leukocytes numbered 4,300 per cu. mm.—41 per

cent neutrophils, 52 per cent lymphocytes, 6 per cent monocytes and 1 per cent eosinophils. The mean corpuscular volume was 98 cubic micra, the mean corpuscular hemoglobin was 31 gamma gamma, and the mean corpuscular hemoglobin concentration was 31 per cent. The reticulocyte count was 6 per cent the day after admission. *P. vivax* was observed upon examination of a specimen of blood.

Upon microscopic examination of the urine on the day of admittance a trace of albumin, 4+ reaction for occult blood and numerous leukocytes were noted. A week later, urinary concentration, Addis counts and the urea nitrogen content of the blood were normal. On June 26, a sulfobromophthalein test was done and there was retention of 6 per cent of the dye after 45 minutes. On June 27 the serum bilirubin was 0.1 mg. per 100 cc. at one minute and 0.4 mg. after 30 minutes. The urinary urobilinogen excretion in two hours was 1.6 Ehrlich units (Table 1).

A roentgenogram of the chest showed the heart grossly enlarged as compared with a film taken during the previous hospitalization in February 1953. The transverse diameter now was 159 mm., an increase of 48 mm. (Figure 1). Repeated electrocardiograms were interpreted as normal. Routine stool examinations revealed ova of *ascaris lumbricoides* on several occasions. No occult blood was present.

On admission the patient received a single dose of 0.8 mg. of amodiaquine hydrochloride (Camoquine), and the temperature, pulse and respirations promptly returned to normal. Certain unusual features were apparent: Moderately severe anemia of recent origin without evidence of internal or external hemorrhage, hepatomegaly, cardiomegaly with ankle edema and microscopic hematuria and pyuria. On special investigation of the cardiovascular-renal system no gross abnormality was noted. The venous pressure was 120 mm. of water and the Decholin arm-to-tongue circulation time was 15 seconds. The pulmonary systolic murmur disappeared, the ankle edema subsided, and the liver edge receded by the fifth hospital day. Slowly the hemoglobin content of the blood returned to normal and the heart size decreased (Figure 1 and Table 1). A two-week course of primaquine was given without untoward

From the Department of Medicine, Letterman Army Hospital, San Francisco.



Figure 1.—*Left*, routine x-ray film of chest taken at time patient was hospitalized in February, 1953, for surgical procedure. Transverse diameter was 101 mm. *Center*, taken June 26, 1953, one day after admission to hospital for *P. vivax* malaria. Transverse diameter was 159 mm. *Right*, three weeks later, transverse diameter was 119 mm.

TABLE 1.—Laboratory findings

	April 1953	June 25, 1953	June 30	July 7	July 14	July 21
Hemoglobin (gm.).....	14.9	8.1	9.7	10.7	14.4	14.0
Reticulocytes (per cent).....		6.0	1.8	0.9	0.9	1.0
Cephalin Flocc.						
24 hour.....			3 plus	2 plus	1 plus	1 plus
48 hour.....			4 plus	3 plus	2 plus	1 plus
Thymol turbidity (units).....			14	10	9	7
Serum globulin (gm. per 100 cc.).....			4.2	4.9	4.3	4.2
Serum albumin (gm. per 100 cc.).....			2.0	3.4	3.7	3.5
Urine analysis						
Albumin.....	None	Trace	None	None	None	None
Erythrocytes per high power field.....	0	Numerous	3-4	0	Rare	2-4
Leukocytes per high power field.....	0	Numerous	1-2	0	1-2	2-4
Casts.....	0	0	3-4	0	0	0
			hyaline and granular casts			
Transverse cardiac diameter (mm.).....	101	159	146	130	119	127

reactions. After this, the mild *ascaris lumbricoides* infestation was treated with hexyl resorcinol crystals. The patient returned to his former physical condition and was discharged from the hospital 50 days after admission.

DISCUSSION

Despite the fact that all United States military personnel in the Far East receive 0.5 gm. of Chloroquine each week as suppressive antimalarial therapy, plus two weeks of curative therapy with Primaquine (15 mg. per day) en route home via ship, a few cases of *P. vivax* malaria have been seen at various military and civilian hospitals.⁴

The patient in the present case had symptoms of malaise, weakness and the unusual feature of swelling of the ankles for about one week before the onset of classical chills and fever. However, in addition, he had severe anemia, cardiomegaly, hepatomegaly, hypoalbuminemia, albuminuria and abnormal cellular elements in his urine. These abnormalities all abated within a week during which the only medication was a single dose of Camoquine.

The anemia in *P. vivax* malaria is attributed to erythrocyte destruction caused by the malarial parasite and is usually normocytic and normochronic. It

may be owing in part to the toxic inhibition of bone marrow activity, for the reticulocytes which are low during the active phase increase temporarily after the parasites are destroyed by therapy. This inhibitory effect is also suggested by the leukopenia present.⁹ The lack of pronounced changes in the serum bilirubin and urinary urobilinogen in the present case would indicate that either the active phase of hemolysis was over by the time the test was done or no hemolysis was present. That there was a marrow inhibitory factor was strongly supported by the finding of an increase in reticulocytes after therapy, and persistent leukopenia. The presence of anemia in patients with *P. vivax* malaria is variable; it occurred in only two out of ten patients with the disease who were observed at the same time as the patient in the present case.

In a review of the literature no previous reports of cardiomegaly in cases of malaria were found. In the present case the anemia may have been the predisposing factor, although Porter and James⁷ pointed out that cardiac enlargement is usually seen in chronic anemia but that if present in acute anemia it is a result of the presence of other cardiovascular disease such as hypertension, arteriosclerosis or valvular disease. None of these factors was present in

the present case and there was no evidence of congestive failure.

Ankle edema has been previously noted in *P. vivax* malaria and has been ascribed to the low serum albumin that is often observed.² The latter is a result of changes in the reticuloendothelial system, primarily in the liver, which together with the increased globulin account for the abnormalities in results of liver flocculation tests.⁶

Finally, albuminuria, cylindruria and microscopic hematuria and pyuria may be due to the alterations reported pathologically in the renal glomeruli and tubules.¹ These are not common in *P. vivax* malaria and when present are transient, mild and reversible. Renal disease varying from that typical of nephrosis, seen mainly with *P. malariae* malaria, to renal failure secondary to hemoglobinuria due to *P. falciparum* malaria, has also been reported.^{3, 8}

SUMMARY

An unusual case of *P. vivax* malaria, with anemia, cardiomegaly, ankle edema, hepatomegaly and renal

involvement, has been reported. The mechanisms have been discussed.

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Falciparum Malaria

Report of a Fatal Case and Autopsy Findings

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MALARIA, although considered to be one of "humanity's chief scourges"² is an uncommon disease in the civilian populace of California. In Los Angeles County, for example, the median incidence of this disease in a five-year period (1948-1952) was one case per year.⁴ In most of these cases the causative organism was plasmodium vivax. Malaria due to *P. falciparum* is rare; in all California only one case in 1953 and only two in 1952 (one of which was listed as "probable") were reported to the Bureau of Acute Communicable Diseases.⁷ Moreover, symptomatic responses to falciparum malaria are much less distinctive than those to vivax or quartan infections and frequently offer little help in reaching a presumptive diagnosis. A disease that is rare and without distinctive features presents a formidable diagnostic problem. In the case here presented the disease was successively presumed to be influenza, intestinal obstruction and acute cholecystitis before a correct diagnosis was made on the basis of observation by an alert laboratory technician.

REPORT OF A CASE

A 65-year-old woman had fever, lassitude, generalized arthralgia and myalgia of three days' duration. Chilly sensations had been present at the onset, for a few hours only. The patient had returned from a vacation in Mexico only a few days before be-

coming ill. On questioning she said that she had been in a region where malaria is endemic but that rainfall had been unusually light and there had been no mosquitoes about.

The body temperature was 101 degrees F. A provisional diagnosis of influenza was made and symptomatic therapy was prescribed. The patient was not improved the following day, and since she lived alone she was admitted to the hospital for care. The body temperature at the time of admittance was 99.4 degrees F., the pulse rate was 70, respirations were 22 per minute and the blood pressure was 146/88 mm. of mercury. There was slight tenderness in the right upper quadrant of the abdomen and very slight abdominal distention.

On the second hospital day, the patient awoke very nauseated and vomited a small amount of clear fluid containing brownish flecks which by chemical test were found to contain blood. She also complained of severe abdominal pain; and an increase in abdominal distention and some diffuse abdominal tenderness was noted. The body temperature was subnormal most of this day. Because of the many stab cells and diminished number of platelets noted on examination of the blood the day of admittance, the pathologist requested additional specimens (see Appendix A—additional laboratory data). These were taken on the third hospital day but revealed nothing diagnostic. Abdominal pain and distention continued and the patient was not able to retain even liquids by mouth. The possibility of intestinal obstruction was considered. A plain film of the abdomen showed a large amount of gas in the large bowel and also in the right upper quadrant a pyri-form shadow of increased density, which was con-

sidered to be the gall bladder. In view of the pronounced distention of the colon, a barium enema was given but as no obstructive lesion was demonstrated it was concluded that the distention might be owing to ileus.

During the fourth and fifth hospital days the temperature fluctuated between 96.8 degrees F. and 102.4 degrees F.; the abdominal symptoms and signs persisted. Shortly after midnight of the sixth hospital day the patient, awakened by severe epigastric pain, became nauseated and vomited several mouthfuls of brownish, mucoid liquid. The blood pressure at that time was 78/50 mm. of mercury. The patient was quite apprehensive and dyspneic and the rate of respirations was 36 per minute. The abdomen was more distended. Peristaltic sounds were hyperactive and there was definite tenderness in the right upper quadrant of the abdomen. A surgical consultant who examined the patient at this time was able to outline a mass in the right upper quadrant which he believed was an acutely inflamed gall bladder surrounded by omentum. He felt that the patient had acute cholecystitis, but in view of the duration of the process recommended conservative management. During this day, the temperature rose to 102.6 degrees F. The patient appeared restless but quite weak. The abdominal symptoms continued.

A laboratory technician, examining a specimen of blood on the sixth day for a routine determination of the numbers of cells, observed numerous malaria parasites. Upon further study they were observed to be predominantly multiple ring form trophozoites with occasional shizont forms and infrequent crescent-shaped gametocytes typical of *Plasmodium falciparum*. Administration of quinacrine, 0.2 gm. every six hours, was started on the seventh day and a total of 0.8 gm. was given. The patient was able to retain this medication but on this day she had a chill with a rise in temperature to 101.6 degrees F., and there was no decrease in the number of parasites observed in a specimen of blood.

On the eighth day the patient became very dyspneic and had some bronchial wheezing and audible rales at both lung bases. The temperature reached 103.2 degrees F. Icterus was noted for the first time and also a large area of ecchymosis in the lumbar region was observed. A total of 3 gm. of chloroquine was given on the eighth and ninth days, of which the patient retained approximately 2 gm. During the ninth day icterus became more intense and for the first time the patient was somnolent, although easily aroused, and even though obviously gravely ill, she was rational and oriented. The temperature during the ninth day fluctuated between 99.0 degrees F. and 101.8 degrees F. However, the output of urine dropped precipitously to 565 cc., despite an intake of liquids of 2900 cc. Several specimens of urine were deep brown in color and thick in consistency. Two smears of specimens of blood taken about twelve hours apart on this day revealed the parasites were still numerous. Quinine dihydrochloride, 3 gm. intravenously, was given on the ninth and tenth

days. On the morning of the tenth day rather profuse epistaxis occurred. Respirations were 16 per minute with the patient at rest, but upon very slight exertion rose to 24 to 28 per minute. The maximum temperature during this day was 101.0 degrees F. The urinary output increased to 820 cc. in 18 hours, and the urine was not so dark as on the previous day. Basal rales and infraorbital and pretibial edema were noted. In the evening the patient was rather comfortable and appeared somewhat improved over the previous day. However, at 11 p.m. a Jacksonian seizure involving the left hand and left leg occurred. It was rapidly followed by generalized convulsion and the patient died.

AUTOPSY

Macroscopic: There was pronounced jaundice of the skin and sclerae. Each of the pleural cavities and the peritoneal cavity contained approximately 500 cc. of yellowish-pink serous fluid. The lungs were moderately congested with frothy reddish-yellow fluid pouring freely from the opened bronchi. There was obvious splenomegaly and hepatomegaly. The spleen, which weighed 350 gm., showed a soft, mushy, dark reddish-purple pulp in which the malpighian corpuscles were not discernible. The liver, which weighed 2,250 gm., had finely mottled, reddish to yellowish-brown cut surfaces of soft consistency. The gall bladder was normal. There was generalized enlargement of lymph nodes, involving particularly the periaortic and mesenteric lymph nodes, which were firm and on cut surfaces were mottled reddish to pinkish-gray. There were a few petechial hemorrhages on the mucosal and serosal surfaces of the stomach and duodenum. The brain substance was slightly edematous and had a faintly yellow cut surface. There were no demonstrable petechiae. The vessels of the leptomeninges appeared slightly congested. The iliac bone marrow was dark reddish-gray. In the remainder of the organs no significant gross abnormalities other than moderate congestion were noted.

Microscopic: Conspicuous changes, chiefly in the liver, spleen and kidneys, were observed.

In the spleen there was loss of normal histological architecture with marked vascular congestion of the sinusoids. The latter were filled with hemolyzed red cells, large mononuclear cells and macrophages laden with yellowish-brown pigment granules and nuclear debris. A few parasitized red cells were demonstrable.

There was evidence in the liver of pronounced parenchymatous degeneration with vacuolization and cloudy swelling of the hepatic cells. The sinusoids were dilated and filled with numerous small round cells, pigment-laden macrophages and parasitized red cells.

In the kidneys moderate parenchymatous degeneration of the tubular epithelium was noted. The tubules contained yellowish-pink granular casts. Similar amorphous pink-staining granular material

was also present in the subcapsular spaces of the glomeruli which were otherwise not remarkable.

There was minimal glial and perivascular edema throughout the cerebral cortex. Parasitized red cells were demonstrable in the capillaries and larger vessels. In addition, there were scattered pigment-laden macrophages throughout the glial substance.

There was moderate vascular congestion in the lungs, with parasitized red cells demonstrable in the capillary lumina.

Upon examination of sections from the iliac crest, hyperplastic marrow with an increase of erythroid and myeloid elements was noted. Parasitized red cells and pigment-laden macrophages were numerous and abundant.

DISCUSSION

Malarial infections have a predilection for organs of the reticuloendothelial system, namely, the liver, spleen, bone marrow and lymph nodes.¹ When macrophages of these organs fail to localize the infection, parenchymatous degeneration may take place in several organs. This is due either to the rapid blood destruction and anemia, or to thrombosis of capillaries, apparently occurring as a result of the agglutination of parasitized erythrocytes.⁶ Although such cells were widespread in the vascular spaces of virtually all tissues examined in the present case, thromboses were not seen, possibly owing to the decreased prothrombin content and thrombocytopenia. Hence, it was assumed that the parenchymal damage noted particularly in the liver and kidneys was related to anoxia resulting from hemolysis and anemia.

Covel³ recently wrote: "There is no known disease which may simulate as many other ailments as falciparum malaria. . . ." Since the experience with the case reported herein, however, the authors have learned that the clinical features observed in the patient—high, irregular fever, nausea, vomiting, abdominal pain and distention, jaundice and epistaxis—are quite characteristic of a type of falciparum malaria well known to malariologists as "bilious remittent fever."^{5, 8, 9} Unfamiliarity with this syndrome and consequently the delay in making the correct diagnosis, as well as the age of the patient, the type of infection and the resistance to substantial doses of three anti-malarial drugs were all contributing factors to the fatal outcome.

SUMMARY

A fatal case of "bilious remittent fever" type of *P. falciparum* infection is presented. It was successively presumed to be influenza, intestinal obstruction and finally cholecystitis before a correct diagnosis was established.

511 So. Bonnie Brae.

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APPENDIX "A"—ADDITIONAL LABORATORY DATA

First day: Hemoglobin, 14.1 gm. per 100 cc.; erythrocytes, 4,430,000 per cu. mm.; leukocytes, 4,400 per cu. mm. with 85 per cent polymorphonuclear cells (76 non-filamented, 9 filamented), and 15 per cent lymphocytes; platelets, fewer than normal. Results of urinalysis were within normal limits except for mild pyuria. No abnormality seen in x-ray film of chest.

Third day: Erythrocytes, 4,700,000 per cu. mm.; leukocytes, 5,000 per cu. mm.—80 per cent polymorphonuclear cells (33 non-filamented, 47 filamented), and 20 per cent lymphocytes; platelets, 85,000 per cu. mm.

Fifth day: Result of test for occult blood in stool, positive.

Sixth day: Serum amylase, 35 units per 100 cc. (normal 40—110 units); serum lipase, 100 units (normal 85—205 units); hemoglobin, 12.9 gm. per 100 cc.; erythrocytes, 3,820,000 per cu. mm.; leukocytes, 6,100 per cu. mm.—83 per cent polymorphonuclear cells (45 non-filamented, 38 filamented), 16 per cent lymphocytes and 1 per cent monocytes. An electrocardiogram indicated left ventricular strain.

Eighth day: Erythrocytes, 2,930,000 per cu. mm.; platelets, 58,000 per cu. mm. Prothrombin: Patient's time, 38 seconds; control, 16 seconds; prothrombin content, 16 per cent. Serum bilirubin, 5.4 mg. per 100 cc. direct and 0.7 mg. indirect.

Ninth day: CO₂ combining power, 23 volumes per cent. Prothrombin: Patient's time, 27 seconds; control, 15 seconds; prothrombin content, 26 per cent. Whole blood chlorides, 516 mg. per 100 cc.

Tenth day: Prothrombin: Patient's time, 19 seconds; control, 15 seconds; prothrombin content, 60 per cent. Erythrocytes, 3,120,000 per cu. mm.; hemoglobin, 10.0 gm. per 100 cc.; leukocytes, 8,000 per cu. mm.—77 per cent polymorphonuclear cells (38 non-filamented, 39 filamented) and 23 per cent lymphocytes.

A Complication of Pyloromyotomy

Recovery After Perforation of Duodenum

MAX R. GASPAR, M.D., Long Beach, and
HARVEY N. LIPPMAN, M.D., Los Angeles

ACCIDENTAL PERFORATION of the duodenal mucosa during Fredet-Ramstedt pyloromyotomy for hypertrophic pyloric stenosis is the most common and most feared complication of this operation. The reported incidence ranges from as low as one in 385 operations¹ to as high as 28 in 110 cases.³ It is not a serious accident if the opening is seen when it is made and is sutured.² However, if not discovered, the continuing escape of duodenal contents will almost invariably result in fatal peritonitis. In a review of the literature no report was found of a proved case in which a patient survived unrecognized perforation. The purpose of this report is to present the case of an infant with unrecognized perforation who survived.

REPORT OF A CASE

The patient, a male infant, was operated upon elsewhere for hypertrophic pyloric stenosis at two months of age. The usual Fredet-Ramstedt procedure was done, permitting the mucosa to bulge into the wound. A small venous bleeding point at the duodenal end of the incision was noted but was not ligated. The highest temperature was 102° F. on the first postoperative day. The patient was discharged on the fifth day with a normal temperature and retaining feedings. No antibiotics were administered during the hospital course.

The infant was admitted to the Los Angeles County Harbor General Hospital 11 days after the operation. The mother stated that four days previously (two days after discharge from a private hospital following the above described operation) the patient began to vomit infrequently and in small amounts. The abdomen became increasingly distended and no bowel movements were noted. Vomiting increased in frequency and the vomitus, at first bile-stained, later became thick, greenish-yellow and had a "bitter odor."

The patient was extremely emaciated and dehydrated, and the pattern of hugely distended loops of bowel was visible through the anterior abdominal wall. No masses, rigidity or tenderness were noted. Bowel sounds were infrequent and high-pitched. No abnormality was noted in rectal examination. Results of laboratory examinations of the blood and urine were within normal limits. A roentgenogram of the abdomen showed several parallel loops of greatly distended bowel with an appearance compatible with mechanical obstruction of the small bowel.

At operation, with the patient under local anesthesia, greatly dilated loops of small bowel were observed. In the right subhepatic space there was an abscess, containing approximately 4 cc. of bile-stained pus, that was connected with a 2 mm. opening in the duodenum at the distal end of the partially

healed pyloromyotomy wound. Bile-stained fluid was easily expressed from the perforation, which was closed with two through-and-through sutures of No. 00000 gastrointestinal chromic catgut. Fibrinous peritonitis involved all the right peritoneal gutter and many loops of adjacent small bowel. The point of obstruction was about 6 inches proximal to the ileocecal valve. The obstruction was relieved by sharp and blunt dissection and the dilated bowel was decompressed by suction enterotomy. It then became evident that a segment of ileum was not viable. Eighteen inches of nonviable and denuded ileum were excised. An open end-to-end anastomosis was done, using an inner row of No. 00000 chromic catgut and an outer layer of interrupted Lembert sutures of No. 00000 silk. The bowel was returned to the peritoneal cavity and, in the belief the patient was near death, the abdomen was hurriedly closed with through-and-through retention sutures of No. 30 steel wire.

That the patient lived was attributable largely to excellent postoperative care by the pediatric staff. Convalescence was retarded because of healing of the skin incision by second intention. By the twenty-second postoperative day the patient had gained 2 pounds in weight and was getting along satisfactorily. On the forty-third postoperative day he was discharged. The body weight then was 10 pounds. At the age of seven and a half months it was 18 pounds and the patient was apparently eating and developing as any normal child.

COMMENT

Perforation in this case was discovered only because intestinal obstruction developed. In this instance it may be significant that there was bleeding at the distal end of the Fredet-Ramstedt pyloromyotomy site during the original operation. Szilagyi and McGraw⁴ pointed out that there is a deep artery and vein running across the duodenal end of the incision at the fornix of the duodenal mucosa, thus indicating the danger area. The hypertrophied pyloric musculature extending into the duodenal lumen can be likened to the uterine cervix extending into the vaginal canal. Consequently, the incision into the hypertrophied pylorus can easily nick the duodenal mucosa if carried too far distally or too deeply. If there is any suspicion of mucosal injury, attempts should always be made to discover them at the time of operation. There are three methods of demonstrating such perforations: (1) simple observation of the hole in the mucosa emitting bubbles of bile-stained fluids; (2) compression of the stomach and duodenum in an effort to force gas or fluid through a minute perforation; (3) with the duodenum compressed injection of air or methylene blue through a catheter in the stomach in an effort to force fluid or gas through the minute perforation. The use of a binocular loupe may aid vision in this area. Once the perforation is found, simple closure with fine catgut or silk sutures on an atraumatic needle solves the problem. Other methods have been suggested but are probably unnecessary.

From the Los Angeles County Harbor General Hospital.

The infant in the present case survived three highly lethal mechanisms — duodenal perforation, intestinal obstruction and small bowel resection. The present-day medical armamentarium of scientific management of fluid and electrolyte balance, antibiotics, blood transfusions, trained anesthetists, and pre- and postoperative care by pediatricians encourages surgeons to intervene in seemingly hopeless problems with some expectation of success.

211 Cherry Avenue.

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Sarcoidosis

A Diagnostic Problem

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BOECK'S SARCOID is usually considered a benign, self-limited disease that in most cases leaves little if any residual damage. Often the disease is entirely asymptomatic and is detected fortuitously on routine x-ray examination of the chest. In the present case, however, sarcoidosis presented a diagnostic problem in an acutely ill patient.

During an acute febrile illness with definite or indefinite evidence of abnormality in the chest on x-ray examination, it is important to consider the following in differential diagnosis: (1) virus pneumonitis; (2) bacterial pneumonitis; (3) Hodgkin's disease; (4) bronchiogenic carcinoma; (5) collagen disease; (6) tuberculosis; (7) granuloma (Boeck's or Wegener's). Although it is well known that usually in sarcoid disease there is involvement of the hilar nodes and lungs, the diagnosis cannot be made from roentgenologic observations alone, for Boeck's sarcoid can simulate pulmonary disease of almost any kind. Laboratory findings that aid in making the diagnosis are: (1) elevation of serum protein and globulin values; (2) accelerated sedimentation rate; and (3) a negative reaction to tuberculin. Elevation of the blood calcium level and increased alkaline phosphatase activity have been reported in a few cases but are not constant findings. Of course, if there are skin lesions or peripheral node enlargement, biopsy of material from these lesions is the most accurate method of diagnosis. The Kveim antigen injected intracutaneously is highly specific for sarcoidosis, its only disadvantage being the length of time required for a nodule to form and then for biopsy. When the diagnosis is uncertain and no peripheral nodes are present, needle biopsy of the liver may give positive evidence of sarcoidosis.

REPORT OF A CASE

A white man 58 years of age was first observed February 10, 1953, with complaints of morning and afternoon fever (101° F.), considerable nausea, lack of appetite and "cigarette" cough—all of about three weeks' duration. (He stopped smoking soon afterward and the cough disappeared.)

Upon examination, tachycardia was noted and the temperature was 100.6° F. Fluoroscopic examination of the chest was carried out and a fairly well defined strand of density extending from the lower hilar area to the periphery of the right lower lobe was observed. The blood sedimentation rate (Linzenmeier) was 18 mm. in 30 minutes. Penicillin was given, 600,000 units a day for a period of one week, and during that time the temperature reached 104° F. on several days, associated with chills. As the patient refused to enter the hospital for further study, penicillin was discontinued and aureomycin, 1 gm. per day, was administered. The patient felt worse and had considerable nausea. In the afternoons and evenings the body temperature rose to 102° F. to 103° F. During a two-week period the abnormalities noted were a few dry rales at the right lung base posteriorly, persistent tachycardia, 4 plus albuminuria with granular casts and accelerated blood sedimentation rate. An additional patch of density originating near the left hilum and extending toward the left base was observed fluoroscopically. At no time was any degree of dyspnea noted, although on several occasions the lips were cyanotic.

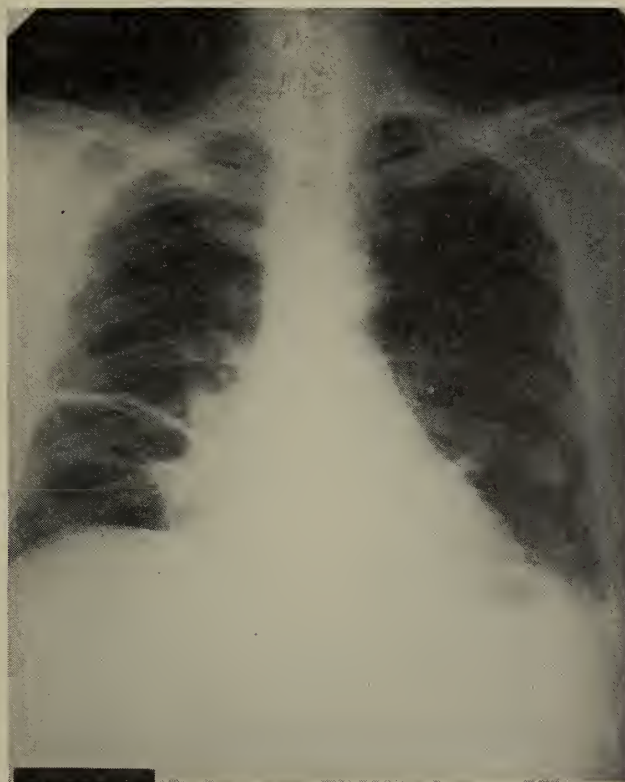


Figure 1.—Linear strand of density extending from right hilum to periphery, with beginning involvement of left hilar area.

After three weeks the patient consented to hospitalization, and various laboratory studies were carried out. Reaction to dermal test with tuberculin was negative on two occasions. No organisms were seen on examination of smears of the sputum and none grew on cultures. There was negative reaction to a test for cold agglutinins. A heavy trace of albumin was noted in the urine. No organisms grew on cultures of the blood. Results of serological tests for Q fever and influenza A and B were negative. Erythrocytes numbered 4,500,000 per cu. mm. and leukocytes 10,900 with normal differential of cells. The content of non-protein nitrogen in the blood was 38.0 mg. per 100 cc., of albumin 3.6 gm. and of globulin 3.4 gm. per 100 cc. Save for tachycardia, an electrocardiograph was normal. No abnormality was observed in roentgen studies of the upper and lower gastrointestinal tract.

Streptomycin and penicillin were given in combination and, although the patient did not become entirely afebrile, in several weeks the temperature tapered off to 100° F. at midnight nearly every day. Nausea increased and appetite was poor, especially for meats.

After some time, slight enlargement of a lymph node high in the left axillary area was noted. Whether or not the liver was enlarged was questionable. At no time was the spleen palpable.

Refusing to have bronchoscopic examination and biopsy of a supraclavicular node, the patient was discharged and use of antibiotics was discontinued. Extreme nausea persisted, the temperature rose to 101° to 102° F. daily and the body weight decreased 35 pounds in two months despite a high caloric liquid diet. Rales were heard upon auscultation from time to time, but never was dyspnea noted. The sedimentation rate remained rapid. In x-ray films the left lower lung field appeared to be clearing but there were still strands of abnormal density present at the base of the right lung. Clinically the patient was not improving.

Three months after the onset of the acute symptoms, the patient consented to operation. Bronchoscopic examination and exploration of the right supraclavicular fat pad were done and no abnormalities were noted. Upon thoracotomy no evidence of tumor in the lung was seen. A lymph node was removed from the lateral tracheal area, the supra-azygous area and the corynal area and the pathologist's report was "Boeck's granuloma with considerable anthracosis."

The patient quickly convalesced from the operation and was sent home, again without medication. Fever, anorexia, nausea and chilly sensations resumed immediately. By then the body weight had decreased 55 pounds since the onset of illness. Administration of 100 mg. of cortisone daily was begun and within a few days the patient was afebrile and was eating well. The body weight increased 16 pounds in two weeks, apparently without extraordinary fluid retention. When the dosage of cortisone was reduced to 50 mg. daily the temperature rose to a high point of 101° F. daily although the patient

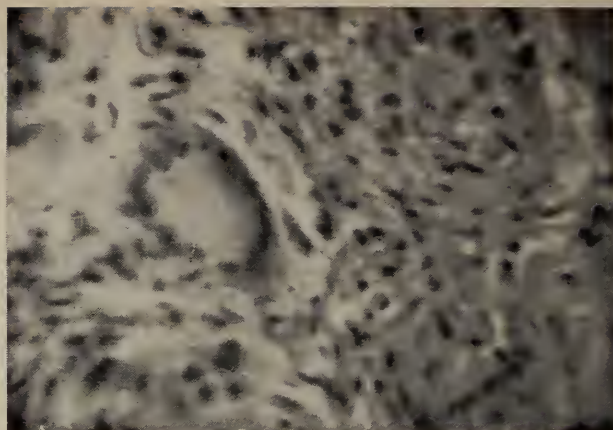


Figure 2.—Specimen removed from hilar lymph gland showing rather typical sarcoid involvement.

felt quite well. The amount given was raised to 100 mg. daily again and the fever abated until, after six weeks of cortisone therapy, the patient again began to have occasional fever (101° F.) associated with a chill. The amount of cortisone then was gradually reduced and 20 units of corticotropin (ACTH) gel was given daily. Again the fever stopped, but after six or seven days it resumed, rising to 100 to 101° F. The patient had a feeling of well-being and the body weight and appetite were well maintained. The blood sedimentation rate was still rapid, however (18 mm. in 10 minutes, Linzenmeier) and there were occasional chills and fever, indicative that the disease was still active. Seven months after the onset of the disease, the patient still had temperature as high as 103° sometimes but was otherwise asymptomatic as long as either cortisone or corticotropin was given.

DISCUSSION

It is important to consider sarcoidosis in any case in which fever is associated with unusual x-ray findings in the lung. Thoracotomy is being used more now as a method of diagnosis in questionable cases of sarcoid, but of course it should be avoided if a diagnosis can be made by other more simple methods. It is of paramount importance to arrive at the diagnosis early in the course of the disease, in order to assure the patient he does not have malignant disease and also to avoid an unnecessary surgical procedure. The toxicity of sarcoidosis can be decreased considerably by the use of cortisone and corticotropin, but it is doubtful that these agents shorten the course of the disease.

SUMMARY

In a patient with nausea, fever, anorexia, loss of weight and pulmonary changes noted in auscultation and on x-ray films, Boeck's sarcoid disease was not diagnosed until biopsy of lymph nodes was carried out. Administration of cortisone and corticotropin, after diagnosis was established, relieved the symptoms but apparently the disease was not cured.

5700 Broadway.

EDITORIALS

New Industrial Fees

AT LONG LAST the Industrial Accident Commission of the State of California has adopted a new schedule of medical and surgical fees for industrial accident cases.

The new schedule will go into effect on October 1 and will provide an increase of something more than 15 per cent over present fees. Translated into terms of dollars, this means that the physicians of California will come about two and a half million dollars a year closer to realizing fair and compensatory fees for treating the thousands of patients who are injured or become ill each year owing to the nature of their employment.

Action by the Industrial Accident Commission in adopting the new schedule came after 17 months of consideration of an application filed by the California Medical Association. The original application asked for fee increases to produce about a 36 per cent increase in aggregate fees. This requested rise was indicated by a comparison of numerous business indices, including the cost of living index, cost of maintaining an office, increases in wages and other factors. The Association believed it had sound reason to ask for this increase in an effort to bring industrial fees into line with fees paid by all other elements of the community.

Before filing of the current application with the Commission, the C.M.A. committee had been met with the official attitude of the Commission that it had no distinct legal authority to promulgate, adopt or maintain a schedule of medical and surgical fees. This decision by the Commission left the C.M.A. in the position of having to negotiate an improved fee schedule with the insurance carriers. Negotiations along this line were undertaken but, as might be expected, the insurance companies were not particularly anxious to agree to a new set of fees that

would increase their costs. In this atmosphere, the two-way bargaining dragged.

Early in 1953 the C.M.A. caused a bill to be introduced into the State Legislature to spell out the legal authority of the Industrial Accident Commission to establish a schedule of medical and surgical fees. Labor and insurance interests agreed with the philosophy of this measure, and it was adopted and signed into law. This meant that as of last September the position of the Industrial Accident Commission was clearly defined; the Commission did have the authority which it felt it had previously lacked.

The new law provided that the Commission must hold public hearings before adopting a medical fee schedule. Such hearings were arranged, all interested parties were notified and three public hearings were held. The California Medical Association went into these sessions in mutual agreement with the insurance industry. Months of meetings had finally produced a schedule which the insurance negotiating committee had approved. The estimated increase in cost to insurance companies was approximately 19.1 per cent.

Then, when the sessions began, employer representatives questioned the percentage of increase requested. In addition, certain labor elements threw up a smoke screen by insisting that each individual item changed in the new fee schedule be justified by the Medical Association. These two elements caused the negotiations to be prolonged and difficult.

Now that the Industrial Accident Commission has taken official action, as of next October 1 all industrial injury cases will be handled on the basis of the new fee schedule.

Before the effective date of the new schedule, the C.M.A. will distribute copies of the fees to all its members. The insurance industry will circularize its members with copies of the schedule. These mailings should go far toward eliminating some of the mis-

understanding and the ambiguities that have accompanied the present schedule.

The California Medical Association is deeply indebted to Dr. Francis J. Cox and his committee. These men have labored for close to four years to gain acceptance of a more adequate industrial fee schedule. While the list to go into effect in October does not realize the committee's sincere belief as to a proper level of fees, it is a long step in the right

direction. The committee has realized a gratifying increase in industrial fees; it has opened the legal door to adoption and approval of an industrial schedule. On the more philosophical side, the committee has learned many of the techniques needed to negotiate, fight for and win more adequate fees for physicians.

With this background, future adjustments should come with greater facility.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Cancer of the Female Genital Tract

*Recommendations of the Cancer Commission
of the California Medical Association*

THE MOST COMMON CANCER of the female genital tract is cancer of the cervix of the uterus. For practical clinical purposes, this is regarded as an accessible cancer and, when properly treated, should yield approximately 40 per cent five-year clinical cures in an unselected group of patients reporting for treatment. If the condition is diagnosed when it is confined strictly to the cervix, the five-year clinical cure rate is approximately 90 per cent. This form of cancer is therefore a curable form and the responsibility of the medical profession correspondingly great.

The Cancer Commission of the California Medical Association issued its first recommendations on the diagnosis and treatment of cancer of the female genital tract in 1936,¹ and a new edition of these studies was published in 1950.² In both studies it was stressed that the vast majority of cases of cancer of the cervix should be treated primarily by radiation therapy. Only in the earliest cases should operation be considered in primary treatment. Since many apparently early or small lesions have already spread to surrounding tissues or produced metastases, many experienced physicians treat *all lesions* by radiation therapy as a primary step.

In the 1950 edition, the Editorial Committee for the Cancer Commission stressed that, "Radiation therapy remains the treatment of choice in practically all cases of cancer of the cervix."

In 1954, the American Cancer Society, National Division, New York City, published monograph No. 8, "Cancer of the Female Genital Tract." There are many excellent diagnostic sections in this monograph. However, the sections on treatment represent opinions so at variance with those of the Cancer Commission and those published in the two editions of Cancer Commission Studies, that the Commission wishes to bring to the attention of all physi-

cians practicing in California its considered opinion that the therapeutic recommendations issued in this monograph should *not* be followed by physicians practicing in this state. Some specific comments on the treatment divisions of the monograph are as follows:

Cancer of the Cervix. The monograph states that "If the lesion is small and the patient young, that is less than 35 years, irradiation is not employed." Comment: The term "small" has no scientific connotation. It may apply to cervical lesions classifiable as Stage II, III or IV. Under average conditions of practice, competent radiotherapy gives superior cure rates to radical operation even in Stage I lesions of the cervix. Therefore, the Cancer Commission still recommends radiotherapy as the primary treatment in the vast majority of cases.

The monograph says further: "Visibly ulcerated lesions, be they Stage I, II, III or IV, should first be treated by radiation . . . When the local lesion has healed, and the patient is convalescent, the further treatment is considered . . . A fair number of patients with Stage I lesions and some with Stage II who are treated by radical hysterectomy will be found to be in good general health . . ." The Com-

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mission does *not* believe that radical hysterectomy should routinely follow competent, adequate radiotherapy of Stage I and II lesions, or, for that matter, any other lesions.

In various portions of the monograph, statements are made concerning specific radiotherapeutic dosages from external roentgen rays, radium, and other radioactive sources. The Commission is informed that these statements are the opinions of the two physicians who prepared the monograph, and were not submitted to nor edited by the radiotherapists attached to the institution from which the monograph came. The Commission believes it would be just as unwise for a radiotherapist to specify surgical technical details with which he is not intimately familiar, as it would be for other physicians to express radiation dosages in form too brief for safe employment.

For the latest year for which mortality data are available (1950), deaths due to cancer of the uterus

corpus and cervix) on the national level amounted to 16,085, and in California to 1,041. By competent treatment, this death toll could unquestionably be greatly reduced. In fact, from 1930 to 1950 mortality from carcinoma of the uterine cervix in California decreased from 29.6 to 17.2 per 100,000 of population, age-adjusted. This gratifying decrease in mortality, in the opinion of the Commission, is mainly due to a greater diagnostic alertness by physicians generally, and is evidence of the value of radiotherapy.

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Los Angeles, May 9-13, 1954

Sunday Morning Session

The Sunday morning session of the House of Delegates of the Eighty-third Annual Session of the California Medical Association was held in the Renaissance Room, Biltmore Hotel, Los Angeles, California, Sunday, May 9, 1954. The meeting was called to order at 9:30 a.m. by the Speaker, Donald A. Charnock, M.D., who presided.

SPEAKER CHARNOCK: Will the House of Delegates of the Eighty-third Annual Session please be in order.

The first order of business is the report of the Credentials Committee.

REPORT OF THE CREDENTIALS COMMITTEE

DR. LOUIS P. ARMANINO: Mr. Speaker, a quorum is present. I move that we accept the visual roll call as evidence of constitution of the House.

SPEAKER CHARNOCK: It has been moved and seconded that we accept the visual roll call as the constitution of the House. Those in favor will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: The House is constituted.

The first order of business that we have today is a very pleasant one. We are going to have the annual report of the Woman's Auxiliary to the California Medical Association presented to this House, I believe, for the first time. It is a great pleasure and privilege at this time to present to the House of Delegates Mrs. Carl Burkland, president of the Woman's Auxiliary to the California Medical Association. Mrs. Burkland! (Applause.)

REPORT OF WOMAN'S AUXILIARY

MRS. CARL BURKLAND: Thank you, Dr. Charnock. Dr. Green, members of the House of Delegates, Auxiliary members and friends:

When the Auxiliary assumes the leadership of any activity, bringing into play its organizational ability, enthusiasm and steadfastness of purpose, there is action; things happen and another successful year results. As your ally, we are grateful for this opportunity to report the salient features of the stewardship you have reposed in us.

All our activities are concentrated in the primary design of furthering the development of a greater recognition, understanding and appreciation of American medicine and the services of our doctors. Much stress is laid on a substantial and healthy growth in membership in order to render this serv-

ice. Although our 5,559 members represent the wives of less than one-half of the physicians in the state, the full program for the Auxiliary is being executed by them. Surely each of the members of this House of Delegates is aware of the grave responsibility we have shouldered, that of making sure everyone, everywhere, is exposed to medicine's point of view. If you will assist us in recruiting the other one-half, knowing that in numbers there is strength, our power of effectiveness will likewise multiply.

Stressing a positive approach to a solution of alleged medical problems, our overall program seeks to educate the doctor's wife and then the lay person. This program was outlined at the state fall conference for all state officers, county presidents and presidents-elect. Workbooks were distributed, containing detailed plans for each committee's work, and after an instructive period a round table discussion followed. Much of the complete cooperation between state and local Auxiliary may be attributed to this session.

1. All but six counties held an open meeting to which representatives of various lay groups were invited as guests. By means of the newspapers the general public was made aware of the program to be presented. The public relations value is obvious.

2. By financial and volunteer service, 72 organizations were assisted; in their state and local branches we have 125 Auxiliary members who occupy positions of leadership.

3. Two Auxiliaries sponsor essay contests of a medical nature, with prizes to high school students in the schools.

4. Sixty thousand nine hundred pamphlets and posters on voluntary health insurance were distributed to physicians' and dentists' offices, drugstores, hospital waiting rooms, and so forth.

5. Four hundred seventy-three gift subscriptions of *Today's Health* were placed in schools, libraries and beauty parlors. Noteworthy of mention are three counties, who contributed this periodical to 86 P.T.A.'s. However, before we attempt to educate the public as to the value of the authentic health magazine, it is wise to keep in mind that all those serving in the medical field should also realize its potential value and subscribe to it.

6. Booths were manned at six county fairs, where movies on health projects were shown, questions answered and literature distributed to the public.

7. Nurse recruitment, through various modes, continues to be the major interest of all Auxiliaries. This year, through their efforts, 73 applicants have received aid by loans or direct scholarships; seven

Auxiliaries sponsor Future Nurse Clubs; three maintain grants-in-aid for needy student nurses and others contribute gifts directly for the student nurse homes.

8. The mental health program materialized in October. Since it is newly organized, the counties are still in the process of preparing the program and learning community needs.

9. Civil Defense is not a popular subject but we cannot be like the proverbial ostrich and have our heads in the sand, so we persist in alerting our members to its need.

It is interesting to note that under the type of public relations on the county questionnaire, almost everything we did was for others. Our publicity and work are geared to acquaint the public with the fact that the public health is truly our concern.

10. Due to a systematic, energetic and capable historian, a 25-year history of the character and scope of the Auxiliary's achievements throughout the state was published.

11. The American Medical Education Foundation has gained momentum both financially and in understanding of its purpose. This particular phase of Auxiliary activity has commanded special attention and the results are amazing. Gratifying, too, is the perseverance of interest in the Physicians' Benevolence Fund.

The statistics received revealed the following approximate figures for philanthropies:

Community—\$11,637.33.

Nursing field—\$16,422.25.

Physicians' Benevolence—\$3,328.33.

American Medical Education Foundation — \$5,800.60.

In order that the House of Delegates may have some idea of the necessary activity of an Auxiliary president, the following has been compiled: Attendance at national convention in New York; 100 year-books compiled for state and county officers; state fall conference planned and executed; national fall conference attended in Chicago last November; C.M.A. Advisory Board informed of all procedures and directives; articles written for all issues of *Courier*; visited and delivered addresses to 30 county Auxiliaries throughout the state; wrote over 1,500 letters (filing necessary copies for reference) and have striven to prepare the agenda for this convention in such a manner that it is satisfactory to the California Medical Association and creditable to the Auxiliary.

The constant and enthusiastic cooperation of the state and county officers and the individual efforts of "working" members have been responsible for whatever accomplishments the Auxiliary has made, and to each the president expresses sincere appreciation and gratitude. It is an unforgettable privilege to have served as their leader.

To Mr. Hunton and Mr. Thomas and their competent staff, our deep indebtedness for their generous, wholehearted help and advice.

To Dr. John Green, and the Advisory Board, our appreciation for their interest and understanding.

To the California Medical Association, our sincere thanks in continuing to keep *The Courier* the outstanding publication of its kind, through their generosity in underwriting its cost and also in contributing toward the success of the Auxiliary session during this convention. The most prized possession of the Auxiliary is its good will and fellowship, which is the necessary spark for our continuance. On behalf of the Auxiliary members, their president extends to the members of the House of Delegates our greetings with the hope that our world may continue to profit by—and indeed become more united through—our doctors.

Thank you. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Mrs. Burkland. I think it is very significant that we should have represented today, on Mother's Day, the distaff side of the California Medical Association. I think the report shows the magnificent work that these ladies are doing and I think we should all give them a big hand for the continuation of this effort. (Applause.)

At this time we wish to announce the Reference Committees for your approval.

The Credentials Committee, Louis P. Armanino of San Joaquin, R. Wendell Coffelt of Los Angeles and F. P. Wisner of Yuba-Sutter.

Reference Committee No. 1, J. W. Moore of Ventura, Dave Dozier of Sacramento and Thomas Dozier of Alameda-Contra Costa.

Reference Committee No. 2, John E. Vaughan of Kern, Thomas P. Hill of Mendocino and Henry Gibbons III of San Francisco.

Reference Committee No. 3, Carl M. Hadley of San Bernardino, Helen B. Weyrauch of San Francisco and Samuel B. Randall of Santa Cruz.

Reference Committee No. 4, Thomas A. LeValley of Los Angeles, Dorothy M. Allen of Alameda-Contra Costa and James E. Feldmayer of Tulare.

C.P.S. Reference Committee, Paul D. Foster of Los Angeles, Dan O. Kilroy of Sacramento and Fred A. Olson of Humboldt.

Is there any objection from the House to the constitution of these committees? The Chair hearing none, declares them constituted.

Reference Committee No. 1 will meet in Room 1344.

Reference Committee No. 2 will meet in Room 6333.

Reference Committee No. 3 will meet in Room 1223.

Reference Committee No. 4 will meet in Room 1234.

The C.P.S. Reference Committee will meet this afternoon, as will be announced later, in this room and subsequently in Room 1348.

At this time it is a great pleasure and privilege to call upon our President, John W. Green. Dr. Green! (Standing applause.)

ADDRESS

PRESIDENT GREEN: Mr. Speaker, Past Presidents of the Association: I am glad to have you here this morning. Members of the House, ladies and gentlemen, guests:

I have no formal address to make to you. In years past when the president didn't go up and down the state meeting with the county societies he was practically unknown to many members of the House. In these days, recent years, when the President has gone up and down the state he is pretty well known. Not only that, but the members know pretty well what he stands for. I am sure everyone here knows that I stand for good medicine and I should say at this time that the very best thing, the very best policy that you can adopt personally in your offices, is that you seem to be honored by the people who come to you for help in their troubles, and that you be sympathetic with them at all times. Also, that you give to them the very best that you have of your professional experience and skill, and in the giving of this service that you be extremely courteous.

By this they shall judge you. I believe in strict honesty between you and your patient with regard to financial matters and the means that you adapt your practices to them, to take care of their financial obligations to you in the rendering of your service. One other thing that your Past President, Gordon MacLean, asked me to mention some time ago and which I forgot, but seeing him here this morning reminds me of this. He said this: In regard to referrals of patients, all of you know that when you send a patient from your office to a doctor for reference, opinion and so forth, you ask him for a report back to you of his finding and his recommendations. One thing that has caused a little bit of difficulty in recent years is the fact that perhaps a general practitioner in referring a patient to the referral doctor omits much information which he might forward to the doctor and many unnecessary procedures in the way of laboratory investigations and so forth might be omitted; this means doing this a second time and charging the patient the second fee for this.

I call that to your attention because I believe it is quite important. One other thing, I believe every doctor in the State of California who is in practice should be what I term a "Cadillac doctor." I don't mean by that that all doctors should own and drive Cadillacs, but I do believe that they should represent in medicine that same efficiency and reputation for quality the Cadillac has in the automobile field.

I have some other reports to make in the supplementary report which would be repetitious if I said anything about it at this time. So with these few remarks we will proceed with the business of the House. (Applause.)

SPEAKER CHARNOCK: Thank you, President Green.

At this time we have some more duties for our President; he is going to present the Fifty-Year pins and I am going to call up those physicians who are eligible for Fifty-Year Membership pins.

Will these gentlemen, if they are present, please come forward?

From Fresno County, Lamont R. Wilson, George A. Hawkins; from Humboldt County, John M. Chain, from Los Angeles County, Frank S. Dillingham, William R. Molony, Sr., Russ Moore, Reginald S. Petter, Celia Reich, Eleanor C. Moore and C. W. Yerxa; from Orange County, Herbert A. Johnson; from Placer-Nevada-Sierra County, Robert E. Peers; from Tehama County, Frank Doane.

Will these gentlemen please come forward? Come to the platform.

... Those present came to the platform....

PRESIDENT GREEN: Members of the House and friends: It gives me a lot of pleasure this morning to award these Fifty-Year pins for service. It is a little bit unusual for a doctor to be able to continue his exertions in the service of his patients for a term of fifty years. I know how difficult that is because I am approaching that point myself and I believe the last few years must be the hardest. (Laughter.) I am just completing my forty-sixth year. However, not all of that has been in the State of California, but I have been in California for a normal span of years of practice even at that.

So I hope you will join with me in congratulating the four gentlemen we have on the platform this morning in the award of this distinguished honor.

This one goes to Dr. Robert Peers of Colfax. (Applause.)

... The award was presented to Dr. Peers by President Green....

PRESIDENT GREEN: As you all know, Robert served us in every capacity possible through the years. He was for a long time perhaps the oldest secretary of the county medical societies in point of years of service. To my knowledge he was chairman of the Secretarial Board when I was a county secretary many years ago.

Robert, my congratulations.

DR. PEERS: Thank you, old dear. (Laughter.)

PRESIDENT GREEN: I hope they wear these pins with as much distinction as they did while earning the honor to wear them.

And now we have Dr. Yerxa, a doctor of distinction also in his community. I do not know the Doctor personally so I can't recite anything personal about him but I do congratulate him on his service to all of us and to all of his patients. Doctor! (Applause.)

... The award was presented to Dr. Yerxa by President Green....

PRESIDENT GREEN: And next we have another distinguished doctor from Los Angeles County whom I have no knowledge of, but I still feel that I can congratulate him just as equally as though I do know him. His name is Reginald Petter. In case you might not know what this spells, it spells P-e-t-t-e-r. Dr. Petter, my congratulations. (Applause.)

... The award was presented to Dr. Petter by President Green....

PRESIDENT GREEN: And last but not least we have Dr. Russ Moore from Los Angeles County and I should like to say to you gentlemen that I envy this man his goatee. (Laughter.) And his professional appearance, because I have no hair on my head. (Laughter.) Neither do I have any on my chin. (Laughter.) So I congratulate you, Doctor, for your service also. (Applause.)

... The award was presented to Dr. Moore by President Green. ...

PRESIDENT GREEN: And now, Dr. Peers, I believe you would like to say a word, which is certainly right and proper at this time. Dr. Peers!

DR. PEERS: My good friend, John Green, members of the House of Delegates and guests:

This is an unusual type of recognition. You know, ordinarily when one is given recognition in a manner such as this it is because of some work that he has done, some actions on his part. But in order to get this particular recognition, this particular pin, one has to show good judgment in the selection of his ancestors (laughter) so that he has a long life assured him. Another thing, he has to join the organization early in life, pay his dues every year and keep out of the hands of the police and the Board of Medical Examiners. (Laughter.) But seriously, I want to tell you that it has been a wonderful pleasure and a wonderful experience to have been associated with the men and women of this great organization. You have been awfully kind to me. You have given me many honors. I may not be here many times more, and so I wish to tell you what I have told you before, that I appreciate very much all the things you have done for me. I try, of course, to deserve them. I didn't always agree with the boys but I always did my best for organized medicine.

It is a sad thing—there is a sad element here—and that is so many of the good men and women that I have known through the years are not here to receive their Fifty-Year pins. I think particularly at this moment of my good old friend, George Kress, who lived to within just a few months of the date of receiving this recognition.

Now I thank you again and I just have one hope for you and that is that each and every one of you will enjoy the work of this organization as I have done and that the time will come when each and every one of you will come up here and get the Fifty-Year pin. Thank you very much. (Applause.)

PRESIDENT GREEN: As they say in TV, Robert, don't go away, we will be back on the air in a few moments.

This is a Certificate of Merit awarded to Robert E. Peers, M.D., by the California Medical Association for the many years of service as secretary of the Placer-Nevada-Sierra County Medical Society signed by Dr. Green and Dr. Shipman for the Association. Robert, there is something that you can also appreciate for your long service to us, and knowing that we appreciate it.

... The certificate was presented to Dr. Peers by President Green. ...

DR. PEERS: Thank you. It will be on the walls of my office as soon as I get home.

PRESIDENT GREEN: And thank you.

One thing more. It seems as though honors don't come singly to these fellows when they are Fifty-Year pin holders. Here is a telegram that just arrived. It is addressed to Dr. Robert E. Peers, the Biltmore Hotel.

"Congratulations, Dad, on attaining another fifty-year award. Carry on. Love,

"Robert and Betsy."

(Applause.)

The other gentlemen think that Dr. Peers expressed exactly what they feel and they say it would be repetitious should they take any time at this moment.

SPEAKER CHARNOCK: At this time we have another award to make, Dr. Green. We have an award to make to Dr. Arthur E. Smith. Will Dr. Smith come forward?

... Dr. Smith came to the platform. ...

SPEAKER CHARNOCK: Dr. Smith has for many years put on a motion picture program for this Association. He has done a tremendous amount of work and has put on excellent programs. And in recognition of this the California Medical Association is awarding him this certificate.

PRESIDENT GREEN: Dr. Smith, we are very glad to have you with us this morning. This will introduce Dr. Smith. I shall read his award:

"Award of Merit.

"The California Medical Association confers upon Arthur E. Smith, M.D., this Award of Merit for his devoted service for five years as chairman of the Motion Picture Committee."

Signed by Dr. Green and Dr. Shipman. (Applause.)

... The award was presented to Dr. Smith by Dr. Green. ...

PRESIDENT GREEN: Dr. Smith would like to address the House for a moment.

DR. SMITH: President Green and members of the House of Delegates: I deeply appreciate this honor. As Dr. Green stated, I have been honored with the chairmanship of the Motion Picture Division for five years, and believe it or not, five years ago when I was appointed, the Motion Picture Division was small. At the present time it has grown from infancy up to the best-attended section in this meeting. That is by actual count. That has come to me several times from various parties throughout the country that our Motion Picture Exhibition is the largest of any in the United States. I don't deserve all the credit but I wish to state that my very efficient secretary, Miss Jones, deserves as much credit—the unsung individual. For five years we have labored together, and believe it or not, gentlemen, it has taken a lot of time. And the counsel that I received I wish to make mention of because when the rough spots turned up with various films, where we didn't know whether

they were good or bad, didn't know whether to accept them or not, it was through the wise counsel of Louie Alesen, Dr. Baumgartner and Dr. O'Neill, and I wish to make mention also of the wonderful cooperation that I received from the American Medical Association and the American College of Surgeons for the selection of outstanding films.

At this meeting we are screening 97 films covering every branch of surgery so we hope that you will find a little time to drop in and see us. I again thank the House of Delegates and President Green for this wonderful honor and I assure you that I will carry on the best that I can in the future for the betterment of the motion picture exhibition. Thank you. (Applause.)

SPEAKER CHARNOCK: Thank you, Dr. Arthur Smith.

We have one more presentation to make. This is to a young lady. The House of Delegates of the California Medical Association is presenting today a prize of \$500 to Miss Beverly Tarver, a senior at Mayfield School in Pasadena, winner of second honors in a national essay contest on the subject, "How Can We Attain the Best Medical Care?"

Miss Tarver's essay won first prize locally in a contest sponsored for high school students by the American Association of Physicians and Surgeons.

Born and raised in Los Angeles, the daughter of a local Doctor of Dentistry, Miss Tarver will enroll at Stanford University this fall. I am going to have Dr. J. Philip Sampson present Miss Tarver to Dr. Green.

PRESIDENT GREEN: I didn't have any idea that I would have the opportunity to introduce to you, this House, such a lovely young lady. At my age I can appreciate them a little bit more than I could when I was her age. (Laughter.)

It seems particularly fitting, ladies and gentlemen, for me to give this check to this young lady who shows great promise, because I happen to have been a charter member of the American Association of Physicians and Surgeons and have been through the years. So the check that I am about to present to her for them and for you—because I know in this House there are many members—a part of the money that you have paid in dues through the years. Your \$10 that you pay every year does such fine things as this to deserving young men and young ladies if they can possibly win it.

This is a thing that has been going on year after year and we are honored to have one of our own get this award of \$500. I should like to introduce to you now Miss Tarver who may have a word to say.

... The award was presented to Miss Tarver by President Green. ...

(Applause.)

MISS TARVER: All I can say is thank you very much and I am very proud and very pleased to receive this award. Thank you. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. Green, for all those duties you have performed.

There are one or two announcements that we wish to make. First of all, stenographic services are available in the C.M.A. office in Room 1221. Anything that you want in the shape of resolutions typed up or some little letters back to your friends, just go up to C.M.A. office and I am sure they will type them up.

At this time we would like to welcome the press, which is with us today. We hope that they get a lot out of this meeting.

One other announcement which we have to make and that is that this apparatus that sits in front of you and over toward my right is a television apparatus of which I understand nothing, but I do understand that it is hot and if anybody touches it they will be immediately electrocuted. (Laughter.) I can think of some people whom I would invite to touch it but for the general members of the House we do not want to reconstitute the House so please, delegates and members of the House, do not touch it. (Laughter.)

There will be county caucuses for the three Councilor Districts which are nominating Councilors at this session. The Third District is the Los Angeles District. They will meet in the Los Angeles Room at 5:00 o'clock today. I will have the number of that room for you before this session is over. I have it here, Room 7334, the Los Angeles Room, at 5:00 p.m. today.

District No. 6, Fresno County, and the other, and Tulare County, Monday at 1:00 p.m., Room 6229.

The Ninth District, Alameda and Contra Costa Counties, today at 12:15, Room 8333. Please be advised of these caucuses.

At this time the Eleventh District wishes to caucus today at 5:00 o'clock in Room 9303.

DR. RIXFORD: Mr. Speaker, I would like to make an announcement to the San Francisco delegation.

SPEAKER CHARNOCK: You would like to have a caucus?

DR. RIXFORD: Immediately following this morning session in Room 1223 there will be a brief caucus of the San Francisco delegation. Thank you.

SPEAKER CHARNOCK: All the Districts will please take notice.

At this time we are going to have our supplementary reports. We have tried to have the report in the Convention Bulletin be the full report but there will be some supplemental reports made. And at this time we will call upon Item 21, the report of C.P.S. Board of Trustees. Dr. Hodges.

REPORT OF C.P.S. BOARD OF TRUSTEES

DR. FRANCIS T. HODGES: Mr. Speaker, Delegates: The California Medical Association in February, 1939, proudly presented for approval its new child, the California Physicians' Service.

Like all infants, it was coddled, spoon-fed and supported by its parents who like all parents expected much of it. It experienced normal growth, outgrew its cradle clothes, behaved like most lusty youngsters, and often exhibited a mind of its own.

For yet in Sunday clothes and when posing for its portrait it did credit to its progenitors and received many a pat on the head.

Even when its distressed parents in punishment for recalcitrant behavior occasionally warmed its backside, it still was assured it was a loved member of the family. Oh, it may have threatened to run away from home a time or two, and I seem to remember sometimes when its parents contemplated running away from it, but the child grew and finally matured, even became self-supporting.

Adolescence evoked the usual bewilderment with awkwardness and strange ways. Illnesses furrowed parental brows while the child lost weight, but they were not critical illnesses. The nurses, the pediatricians and the tutors did their best and the family may now take some satisfaction in seeing its child at work. It can rightfully be expected to work for those who produced it and this is its work progress report.

In March of 1953 C.P.S.-Blue Shield designed a program intended to accomplish the following ends:

1. The development of simpler and better contracts suited to the needs of subscribers, employers and others responsible for payment of premiums and satisfaction to the physicians and hospitals rendering the services contracted for.

2. A reversal of the downward trends in membership and a healthy regrowth.

3. Unceasing attention to financial soundness, a prime essential to the interests of physicians and subscribers.

4. Adherence to the principle that satisfactory public and professional relations are the product of operations that win confidence rather than of some department or agency for this purpose.

5. Sound and efficient administration to make the operating costs a much smaller and smaller percentage of gross income, thereby permitting increasing benefits to the public and more adequate reserves and ample fees to doctors.

New contracts. Exhaustive study by many C.P.S. administrative members and the Contract Committee under Dr. Reynolds has led to the new type of group contract now to be offered to the public. These contracts not only are simplified as suggested by the C.P.S. Study Committee but benefits have been broken down, many annoying exclusions, exceptions and limitations have been abolished and overlapping eliminated. Rates are established that are adjusted to current trends. Intended to parallel the new group contracts in their far more realistic features are new direct pay and individual contracts now being perfected, providing for continuation of broader benefits to the subscriber leaving a group and also permitting coverage beyond the usual retirement age. Through this agency at least a partial solution to the ever greater problem of medical care for the aged may be found, and without any great change in C.P.S. policy.

Current study also concerns other aspects of financing illness costs of the elderly as well as of the indigent in certain areas lacking public facilities for the purpose. Some statisticians point out that this branded type of care can be more economical to the community. Certain college groups also will have coverage based upon their specific needs. There is also current examination by the Contract Committee of coverage of the so-called catastrophic illnesses, with the intent of offering more realistic protection. No half-baked or prematurely conceived contracts will be offered by C.P.S.

Membership—Subscriber Members. It is not necessary to repeat the sequence of events that led to the diminution of subscriber membership from the high of 1,029,048 in December of 1950, when there was joint operation with Blue Cross, to the low of 599,279 in July of 1953, when dissolution of this relationship was about completed. A profound change in sales methods was inaugurated at about that time. A factual, low-pressure type of approach. Jalopy-lot pitches have no place in C.P.S. promotion. The steady growth to 630,982 at the end of March 1954 attests to this less dramatic but more ethical approach. We conservatively estimate that the end of next March will see an additional 95,000 added to our rolls, a total of 727,244, without any change in income ceiling or similar stimulant.

There is beginning to be a demand by labor and national businesses for an organization that can underwrite interstate sickness protection despite the obvious present absence of facilities. Certain closed panel plans desire this business; up to now they cannot furnish the required service. Only Blue Shield and Blue Cross currently can. We should show aggressiveness in retaining for private medicine the increasingly greater number of workers available for coverage.

C.P.S. has been alert and active. Recently 8,000 members have so been added to our rolls, the largest such contract being with Swift & Company. Certain West Coast industries also are being written through mutual contracts with plants in neighboring states. We can reasonably expect C.P.S.-Blue Shield, within the limits set forth by the medical profession, to grow. The groups now being enrolled, while small, are composed of those people who most appreciate the services of a doctor known to them, and who value the freedom to choose whom they desire.

Physician Members. A net of 391 physician members were added to our list during the fiscal year just completed, bringing our membership to an all-time high of 11,485. In the fall of 1953 a number of resignations were received from internists. Precipitating this action was a resolution adopted by the California Society of Internal Medicine relative to the long existent problem of whether C.P.S. should recognize a differential fee schedule for internists. Because of the great need for unity within the profession in the interests of the best public relations it is hoped that this problem can be resolved. Let it here be mentioned that many internists withheld

action or cancelled their resignations with this most vital thought in mind.

Meeting Closed Panel Competition. The C.P.S. Study Committee, in reporting to the House of Delegates, urged county societies to devise plans that could compete with closed panel plans. Success was predicated upon the following:

1. A high degree of doctor confidence within the unit.
2. Management sponsorship or approval.
3. Group sponsorship by union labor or other organized group leaders.
4. Contracts with comparable benefits, rates that are in relationship to services offered and a realistic consideration of the matter of income.

The four conditions vary relatively with the situation but all must be present if physicians and Blue Shield are to achieve success. An outstanding instance of such success is the new contract signed by C.P.S. with the new branch of the University of California in Riverside at the request and with the cooperation of the local doctors. A closed panel plan was thus rejected.

San Pedro's spectacular success was even more noticeable. There with Dr. Horn's able leadership the physicians brought about a cooperative action with labor and management that led to the enrollment of 4,000 subscribers. A key factor in this success was the voluntary action by the local physicians in waiving the income ceiling cost, thus accepting C.P.S. fees as full payment. Dr. Horn will tell you that this feature rendered C.P.S.-Blue Shield's contract competitive. It is also noteworthy that this community has felt a high doctor confidence from the very start.

C.P.S. Income Ceiling. Consideration of the income of the individual patient as one criterion for the setting of the doctor's fee is traditional in the medical profession. Today union labor leaders bargain with management for so many cents per hour, regardless of the income of the individual employee, to cover the cost of medical-surgical and hospital care as a common practice and labor negotiators claim it is most difficult to explain to their union members why doctors' fees should vary when the contribution of the employer is on a flat hourly basis. In fact, many labor negotiators speak often contemptuously of medicine's Robin Hood method of fee setting. Most labor leaders will not attempt to explain this difference to union members, with the result that C.P.S.-Blue Shield sells few large groups. Where doctors have been active in the solicitation of any large group in competition with closed panel plans, that is without an income ceiling, they have been continuously reminded by group leaders that the income ceiling must be raised to \$6,000 or eliminated.

In both Riverside County and San Pedro the income ceiling was eliminated in order that the groups involved might be retained for doctors in the private practice of medicine.

During the past few months there has been increased activity on the part of different groups within the medical profession to secure an increase in the C.P.S. annual income ceiling.

The C.P.S. Board of Trustees and management followed a policy of selling contracts within the present limitations, feeling that it was the decision of the medical profession and not that of C.P.S. to make possible the enrolling of larger groups through the raising of the income ceiling if the profession desired to do so. C.P.S.-Blue Shield stands ready to continue its cooperation with any county society or any group within the profession, but the officers, trustees and management feel that the income ceiling decision is one for the profession and the profession only.

The Financial Status of C.P.S.-Blue Shield. C.P.S. continues in a sound financial position. It is believed that reserves are adequate to meet any normal contingency, the total being midway between the minimum and maximum recommended by the National Association of Insurance Commissioners. The Financial Committee of C.P.S. and the management have given consideration to the possible adverse effect on the financial condition of C.P.S. in the event of increasing unemployment. The effect of growing unemployment in the Middle West on Blue Shield plans is being watched and it is believed that the finances of C.P.S. can be so handled as to meet any increased unemployment in this state without materially affecting the soundness of the operation.

Through more effective control of costs and adequate budgeting of expense it was possible to increase the fees paid to doctors on January 1, 1954. It is anticipated that the added payments will total approximately \$1,400,000 in the twelve-month period.

During the period from 1949 to date C.P.S. has increased its payments to doctors from 80 to 90 per cent of the existing schedule, from 90 to 100 per cent and from 100 to 107 per cent of the C.P.S. Schedule of Fees.

This most recent increase in the payment of fees has been accomplished without an increase in the rates charged subscriber members and it is hoped that continued growth and efficient operation will permit additional readjustments as income warrants.

Fee Relativity. The value of one fee as compared with another is receiving wide study by many groups across the country and may lead eventually to a more universal fairness of fees.

C.P.S. - Blue Shield - Blue Cross Affiliation. The C.P.S. Study Committee recommended a closer affiliation between the two Blue Cross plans in California and C.P.S.-Blue Shield. The benefits of such association in other areas of the country are impressive. Much larger operations than ours work in harmony. While it was not practical or possible to stop the dissolution or the joint operation of Blue Cross and Blue Shield in Southern California, groundwork was laid for cooperative effort in the solicitation and servicing of national accounts. This

joint handling of national business has made possible the closer and more friendly relationship resulting in the elimination of unethical competition between the three non-profit plans. Meetings of the joint Blue Cross-Blue Shield Committee under the leadership of Dr. Lewis Alesen—and there was one last May in this hotel—are meetings held as occasions warrant, and it is hoped that an even closer affiliation may ultimately result. Consummation can be achieved by realization by all parties of the vital interests of each, but even more so by consideration of the public good. Possibly one way that we can work to achieve this is the joint writing of certain contracts which may be a triumph of this aim that we hope to achieve.

The Veterans' Program. The program of home town care for the veterans of California continues in the same pattern as during the previous year. In the past twelve months the doctors of California were paid through C.P.S.-Blue Shield a total of \$1,573,030.72. During the past year the Veterans Administration has been subjected to pressure for the reduction of expense and this cost reduction program has reduced the total funds available for the Veterans' Program in California. Due to the size of the state and the inadequacy of veterans' hospitals and clinics it is believed that this program can continue and thus preserve for the doctors of the state the opportunity to serve veterans in all areas where no veteran facilities now exist.

Relations with Other Blue Shield Plans. During the past year much progress has been made in broadening and cementing relationships with other Blue Shield plans in various sections of the country. The Blue Shield community is of increasing importance nationally. Your president has been invited to address doctors in a number of states on the Pacific Coast on problems of mutual interest, with the result that the problems of C.P.S. and its present objective are more sympathetically understood.

An active part has been taken by your president and your past president, Dr. Cass, and members of C.P.S. management in National Blue Shield Commission programs. Meetings have been attended in Chicago, New York, Pittsburgh and elsewhere. A demonstration of the willingness of other Blue Shield plans to work with C.P.S. in the development of national business has been reassuring. It is anticipated that a closer working arrangement will make possible the securing of a greater number of members among people moving to California.

Through the election of the Board of Trustees C.P.S. is now cooperating in the financing of an advertising campaign for Blue Shield in national magazines, and the effect of this advertising in making C.P.S.-Blue Shield better known among management, labor and other groups is already noted. This advertising is carefully planned to be coordinated with the advertising programs normally conducted by the various Blue Shield plans.

Today's Attitude of Doctors Toward C.P.S. The active and enthusiastic cooperation of doctors from

Oregon to the Mexican border has not only been reassuring but inspiring. In areas confronted with active closed panel plans the doctors have given of their time and effort to meet with management, labor leaders and others in a sincere effort to evolve a program that would continue to permit the free choice of physician and at the same time give the subscriber member a good and sound plan of providing funds for the payment of medical, surgical and hospital bills when necessary.

The C.P.S. decentralized program, first tried on an experimental basis in Santa Clara County, is now being extended throughout the state. Most counties had active C.P.S. Contract Committees and these committees are working not only in their own societies but are reviewing unusual claims, suggesting prospects for the sale of C.P.S. contracts and actually cooperating in the sale of contracts to larger groups.

There has been a marked increase in the support of doctors in all types of programs for the providing of funds for the payment of medical, surgical and hospital bills, resulting in more helpful advice to patients and closer working arrangements with their own societies and carriers of health insurance including C.P.S.-Blue Shield.

Indemnity Type Insurance. Following the adoption of a resolution by this House of Delegates and approved by the C.M.A. Council and the C.P.S. Board of Trustees, the California Physicians Insurance Corporation was formed. The various requirements of the office of the Insurance Commissioner, because now we are dealing with insurance and we deal with the Insurance Commissioner as far as this is concerned, have been met, \$400,000 has been invested by C.P.S. in this insurance company and it is anticipated that the final approval needed from the Insurance Commissioner will be forthcoming in the very near future.

This insurance company has been formed as a non-profit corporation with all of the shares of stock owned by California Physicians' Service and it therefore is a wholly owned subsidiary.

It is anticipated that contracts on an indemnity basis, covering employees of national corporations will be written in the not too distant future. The insurance company will be prepared to develop and write policies of insurance on an indemnity basis using the average fee schedule plan in such areas as requested.

As the members of the House of Delegates know, a number of counties have now developed their own fee schedules but as yet no request has been made by a county actually to sell insurance using any of these fee schedules.

While originally conceived for the purpose of writing this type of coverage within the state, this company is additionally useful because of the new interstate contracts. Many of the technical problems developing may be more easily solved as a result. The trustees and the administration were greatly heartened by your acceptance of the C.P.S. report at the December Interim Meeting. The efforts of all will

constantly be exerted to keep C.P.S.-Blue Shield an effective public trust because that is what it is.

If I may return to my metaphor and torture it a bit in terminating—after all his years of being supported by his parents, our child appears now to be physically able to help them and shows fair promise of being recognized by the neighbors as a responsible and useful citizen who can defend his own home and the entire community of which he is a part. Thank you. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. Hodges. This report will be referred to the C.P.S. Reference Committee.

At this time we are going to have the Past Presidents of this Association stand up. Those who are present at the meeting, will you please stand; we are going to have Dr. Molony, who has just recently come, come up and get his Fifty-Year pin.

Dr. Ewer, Dr. Kinney, will you please remain standing? Dr. Junius B. Harris, Dr. Reinle, Dr. Peers, Dr. Harry Wilson, Dr. Molony, step up on the platform. Dr. Karl Schaupp, Dr. Lowell Goin, Dr. Sam McClendon, Dr. John Wesley Cline, Dr. E. Vincent Askey, Dr. R. Stanley Kneeshaw, Dr. Donald Cass, Dr. H. Gordon MacLean, Dr. Lewis Alesen.

Will you gentlemen please remain standing while Dr. Molony receives his Fifty-Year pin?

PRESIDENT GREEN: Members of the House: It gives me a lot of pleasure to present this pin to my old friend, Bill Molony, whom I have known for many years and very favorably. My congratulations to you, Bill.

... The award was presented to Dr. Molony by President Green. ...

DR. MOLONY: Thank you.

PRESIDENT GREEN: Would you say a word?

DR. MOLONY: I will say this, that I am deeply honored and very thankful to receive this pin. It is very easy to look backward. Looking backward really doesn't accomplish very much but I always bear in mind what Bishop Conaty of Los Angeles said many years ago: "Don't be looking backward, but keep your eyes on the brow of the hill."

Thank you very much. (Applause.)

SPEAKER CHARNOCK: Thank you, Dr. Molony. Thank you, gentlemen.

At this time we will have an additional report by our President, Dr. John Green.

REPORT OF THE PRESIDENT

DR. JOHN W. GREEN: Mr. Speaker, members of the House: My preliminary report is in print as you well know, delineating my official visits up to the first of January, 1954. I would be remiss if I did not mention the fact that I have also made some other official visits which I will now report as the supplementary part of my preliminary report.

Since the preliminary report already published in *CALIFORNIA MEDICINE* I have attended all meetings of the Council and all meetings of the Executive Committee of the Council in 1954. Visits have also

been made to Riverside County at Riverside and to four branches of the Los Angeles County Medical Association. By special invitation I was a guest of the Sonoma County Medical Society. Tulare County Medical Society was visited in January, and I attended the luncheon meeting for Dr. Edward McCormick, president of the American Medical Association, in San Francisco on January 27.

San Bernardino County was visited on February 1, and on February 16, Bakersfield. On February 20 I attended the annual meeting of the California Blood Bank Commission at Sacramento. This meeting, conducted by Dr. John Upton, chairman, was of particular interest in that it reflected continued activity in all the problems of blood collecting and distribution plus the research effort required. It is not possible to commend this group too much. Their contribution in case of attack which we could face would be invaluable. I call your special attention to the report of Dr. Upton and his commission.

On November 30, by special invitation from Dr. M. D. Wilcutts, Medical Director of San Quentin Prison, I inspected the entire facilities and prison hospital and found the staff well organized and the hospital departmentalized and all activities properly reported. I was agreeably surprised at the cleanliness and neatness of the entire installation. The x-ray and laboratory equipment are excellent and the teamwork of the group was noted. The corps of consulting doctors represents the best in the Bay District. After lunch with the Medical Officer and the Warden, H. O. Teets, we discussed the medical and hospital service at length. Dr. Wilcutts, who was formerly an admiral and commanding officer of the Naval Hospital at Bethesda, Maryland, is to be congratulated on the excellence of the service and his organization. It is not the prerogative of your president to set policy for this organization but I feel it could be a matter of discussion as to the possible merit of a plan to have the Governor of the State of California invite the President of the C.M.A. to make an annual inspection of the prison's facility. I hope this House may decide on this matter. An annual report to the Governor of the State would be gratifying to him as well as valuable to us.

On April 10 and 11 the meeting of the Medical Services Commission was attended and I wish to comment most favorably upon the activities of this group chairmanned by Dr. Magoon, with Dr. Teall as vice-chairman. Their report to the House should be the most interesting and most valuable portion of the present meeting. Give this group a worthy proportion of your praise for the time and efforts by them.

Dr. Francis Cox and his committee have labored long to obtain a new schedule of fees for industrial accidents. A set of circumstances over which they have had no control has prevented up to now the consummation of his efforts. Pay attention to his report.

Dr. Henry Randel has just recently been cited by the Council of Parent-Teachers of California for the work of the Rural Health Committee. The effect of all

the activities is hard to evaluate. One of the members of the committee was kind enough to go to San Francisco and accept the award. This gentleman, Dr. Carroll B. Andrews of Sonoma County, has long been active in this field. Dr. Randel was in Europe at the time of the meeting.

There are many other opportunities for your president to indulge in social activities, but the need to practice medicine a little prevented me from accepting many gracious invitations. A president of this Association could very well be a full time man.

Thank you very much. Respectfully submitted. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. Green. It looks as if the gentleman from Vallejo was really busy.

At this time we will call upon any officers who wish to make supplemental reports, not the standing committees.

... There was no response. ...

SPEAKER CHARNOCK: At this time the Committee on Postgraduate Activities, Edward C. Rosenow, Jr., chairman, will make a supplemental report. The report of Dr. Green will be referred to Reference Committee No. 1. Dr. Rosenow!

REPORT OF THE POSTGRADUATE COMMITTEE

DR. EDWARD C. ROSENOW, JR.: Mr. Speaker: Thank you very much for your generosity in giving me a few minutes to make a supplemental report.

This is a report from your State Postgraduate Committee. On page 24 of your leaflet you will find the complete report and I only wanted to make this additional report.

With the development of the lecture library of Audio-Digest the Postgraduate Committee has made available all of the lecture tapes in the Audio-Digest library for use at any county medical society meetings in the State of California free of charge. You may get these tapes by communicating directly with Audio-Digest at 800 North Glendale Avenue in Glendale, or communicating with the State Medical Offices, 450 Sutter Street, or to Dr. C. A. Broadus in Stockton, at 1036 North Center Street.

At this time also I would like to make a very brief report on Audio-Digest if the public relations men will distribute these bits of information so that you may have them. These are just some things that you can read at your leisure. We should actually give you each a tape so that you could listen to this instead of reading it, but the conversion of people's education from reading to hearing is a little slower than this and so for at least this meeting we will let you read this as well as listen.

In December this House of Delegates took over Audio-Digest as a non-profit corporation which is a subsidiary of the California Medical Association and your Council advanced the Audio-Digest Foundation \$10,000 to get it started in business. We had 100 subscribers to the digest, which as you know runs an hour. They are abstracts of medical literature and put on tape. At present there are approxi-

mately 600 subscribers. This includes all of those who will subscribe to the weekly digest on general practice, the twice-monthly digest on surgery, twice-monthly on internal medicine and twice-monthly on obstetrics and gynecology.

The amount of money that we have now used from this \$10,000, I am happy to report, is only \$5,000, and I think before another year rolls around we will actually be making a surplus. We don't call it a profit, naturally, but a surplus. Any that we have will be devoted to medical education in the medical schools, as you all know.

We have almost 600 subscribers. Plans are now on foot for expanding the digests in the near future by adding perhaps a digest on pediatrics; after that we will have to kind of see. I want to give also a few little interesting highlights about the digest. We are attempting to set up at the Los Angeles General Hospital a pilot plan in intern and resident training in which we are going to make available to the interns and residents a tape recorder or some method of listening to these and provide them with the lectures and the digest to see whether this is a useful adjunct to intern-resident training.

You might be interested to know that the Standard Oil Company has purchased \$600 worth of supplies from Audio-Digest for distribution to their doctors in Iran. They have 45 doctors over there who have no opportunity to go to meetings for three years. The Interior Department has written us asking for information so that we may send these digests to the doctors in the Indian Service. South America is—I use this as sort of a general term but we have had quite a few requests from South American countries about translating these digests and distributing them in South America. So far we haven't been able to cut through—although we are experts in tape production we are not experts yet in tape cutting, and we haven't got the State Department and a few other little odds and ends in the red tape field handled. We are pretty good at magnetic tape. (Laughter.)

You might also be interested to know that the Postgraduate Committee of the Texas Medical Association wants to use our service as its postgraduate educational program throughout the State of Texas. Organizations such as the American Heart Association have expressed a willingness to make available to us tape recordings of some of their panel discussions, and we have other societies very anxiously cooperating with us in this endeavor. Sometimes men write in and say that the tapes are kind of expensive. They are \$2.75 apiece. If you go to a music store, which I did recently, they are \$3.50 retail and we give you the digest on them. They can be erased and used over. One of my friends said, "You ought to charge a little bit less for having to erase what you have put on there," but (laughter) that is about all that I want to say. The information is all in your report here.

I want though at this time to tell the House of Delegates that I personally have had a great deal of pleasure in working on this project. I think it has a great future and I hope that I may have the privi-

lege of continuing to work. There is one final statement and that is that we have a booth right at the corner of the Galeria where you turn down to the right. I hope all of you or as many of you as can will stop and listen to the Digest. It is possible you have some teenage daughters or somebody at home that would like to begin spinning tape to record the Hit Parade and you might subscribe to one of these digests as a cheap way of getting tape for the teenagers; that will make your product take on added luster.

Inasmuch as we are in the abstracting service, I could make this go on for two or three hours but we pride ourselves on making it short and I thank you for your forbearance. Thank you very much. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Doctor. And now the abstract of the abstract report (laughter) will be referred to Reference Committee No. 1.

We will now have a report on Public Policy and Legislation. Dwight H. Murray, Chairman. (Applause.)

REPORT ON PUBLIC POLICY AND LEGISLATION

DR. DWIGHT H. MURRAY: Mr. Speaker, President Green, members of the House of Delegates: I am glad to be here this morning. The report that we have to give you is a little bit diversified inasmuch as we wish to cover the activities in California as well as something of the happenings in Washington. You may be interested in all these things and I would like for a minute for you to realize who your Legislative Committee is. If Dan Kilroy and Jim Doyle will stand—there is Jim Doyle in the back of the room (applause) and Dan Kilroy from Sacramento. (Applause.)

Now the Advisory Committee is Frank MacDonald. Is Frank here? There is our Surgeon General, Frank MacDonald. We have Dr. Madeley and Dr. Stegemen—are they here? And Dr. Curtis. Is Dr. Curtis here? Dr. Glenn Curtis. Well, they make up the Advisory Committee for the Legislative Committee.

Then on the Washington front we have the West Coast representative as you all know, Dr. Lafe Ludwig. (Applause.) I wanted you to see and know who the members of your committee are. If things go well, compliment the members of the committee. If they don't go well, give the chairman the devil. (Laughter.)

I would like to start off by calling on Ben Read to give a little review, may we?

SPEAKER CHARNOCK: If there is no objection we will have Ben Read make his little report.

REPORT OF THE ADVISORY COMMITTEE

MR. BEN READ: Mr. Speaker, Mr. President, members of the House of Delegates: As you all know, June 8 is the primary election date in California. We assume and hope that you are all registered and

ready to vote, you and the members of your family and acquaintances, your employees. At this time you will select a nominee for United States Senator, all thirty of the Congressional seats from California, Governor, Lieutenant Governor, all of the state officers, twenty State Senators and all 80 members of the Assembly.

Nineteen members of the State Legislature have no opposition. In some of your districts there are some very warm contests. Many of your proven friends are running for reelection and they are going to need your support and assistance. You no doubt have already received information about a number of these; without being specific as to those men, I would just like to mention one instance particularly. In San Diego County, there is your good friend Senator Fred Kraft who stood up when the battle was tough—he kept the compulsory health insurance bills wound up in committee. This is a real fight.

I mention this by way of observing what can be done. A strong medical-dental committee has been formed there and with the aid of other members of the profession, the allied groups and the Woman's Auxiliary, they are doing their best to return Senator Kraft.

We assume that all of you do know who your legislators are. In some cases there is not an incumbent—where there is an incumbent, of course you have his record; you know what he has done. In cases where there is no incumbent, it is an open district with new candidates and we hope you will screen those, get acquainted with them and present to them your views regarding public health legislation and legislation to uphold our professional standards. At this election in June you will select the men who are going to vote upon the laws that permit you to continue to practice as you do at the present time; we ask you to do this. Thank you. (Applause.)

DR. MURRAY: I would like to reemphasize what Ben has said: Now is the time to become acquainted with the people who may represent us in Congress or our State Legislature.

Now, during the past few months the Interim Committees have been studying some problems pertaining to medicine. The committee from the Committee on Public Health in the Assembly and also the Committee on Business and Professions have been meeting, studying some of the problems of medicine. Those committee hearings have been ended and have been taken care of; proper testimony has been given by Dr. Dan Kilroy. He tells me that there is very little to report at the present time, inasmuch as the reports are not finished. The final reports will be ready at the next meeting of the House of Delegates. I don't mean one day after tomorrow, but at the next time the House of Delegates convenes in its next session.

Now on the national front you are probably somewhat interested in what is going on. If you are not, you should be. I will have to say that so far as some of our bills are concerned we are meeting with heavy weather before our national congress. I wish to state

it now so that you may all have clearly in mind exactly what happens before testimony is given for or against these bills. I hear so often that, well, that is somebody going off the deep end. That is not true.

Before a bill is considered by the American Medical Association it is studied first by the West Coast representative here, who represents Oregon, Washington, California, Idaho, Nevada, Alaska and the Hawaiian Islands. That is Lafe Ludwig, whom you saw a few moments ago. Now, this Legislative Committee goes over all these bills line by line. They spend hours and hours studying the bills for what effect they may have upon medicine now or in the future.

After they have gone over these bills they make recommendations to the Board of Trustees. The Board of Trustees then goes over them in the same manner, oftentimes in conference with at least the chairman of the Legislative Committee and finally arrives at a decision whether a bill should be supported or opposed. After that is done, if we will suppose that we are going to support the bill, then the testimony has to be written.

As you know, 75 copies have to be prepared and given to the committee before we can appear. That work is done in the headquarters in which all the members of the staff participate in working out the testimony to be given on these bills. That sometimes is a very long arduous task. When the final report comes out, that is checked again.

We feel that any time a bill is worth while appearing for, it should bring in somebody in an official position for A.M.A.; if he does not give the testimony, at least he is there to give it official status, and that is done.

Most of the time it has been some member of the Board of Trustees who has represented the American Medical Association at these hearings, and I must say that the hearings have been very carefully and well covered. Our legislative officer in Washington works with the Legislative Committee and is constantly in contact with headquarters of the A.M.A. and the members of the Board of Trustees in informing them of any recent or last-minute changes.

Now, gentlemen, I am sorry to report to you that on some of our bills we are having a little heavy weather, as I say, and I might just mention two or three of them. The President's Reinsurance Bill is one. The bill proposed currently is H.R. 2700, the bill that is proposed by Wolverton, the chairman of the Committee of Interstate and Foreign Commerce. There is also the bill for the extension of the Hill-Burton Act, which would visualize additional money to make possible the building or the erection of facilities for treatment and diagnostic centers.

Now that is pretty loosely drawn and isn't very clear, and we feel that that is not probably exactly as we would like to have it. In a few minutes these bills will be a little more carefully explained by our Legal Counsel.

I wish to say this in regard to the entire overall situation in Washington and what we think of it: It isn't very difficult apparently for the Administra-

tion to change, in the various departments, the number one man. That man has been appointed—had been appointed before so it is just a reappointment. But the career men who have established themselves in the number two, number three, number four and number five positions way on down the line, they are the ones that we have to deal with.

I know in one of the departments, the head of the department said to us very frankly, "I know practically nothing about the problems that you are discussing." Therefore these people had to have some advice, so the natural thing is that they take advice from the people who have been there. I understand these career people have been there a long time and they have been working on these problems and their advice is not always parallel with the advice that we might give.

That is where apparently our big difficulty comes in. I don't know what the correction is going to be for it, but at least it is going to take some little time before such things can be corrected. We hope that before we are finished with this session of Congress, things will come out very well.

Practically all of our bills have passed the hearing stage and they are now before the two bodies, either the Senate or the Congress, on the floor for debate.

We have one bill that was introduced just a few days ago that will be of very great importance to the medical profession. It is Senate Bill 3363, Senator Saltonstall; this is the President's idea of the medical care of the military, the dependents of military personnel. That is the bill we have been waiting for for some time and it was just introduced. I got it by airmail yesterday. That bill will have to be—I can't discuss it with you now because I haven't had time to read it and study it, but that will be one of the bills which you will be hearing about before very long.

It is a pleasure to be here, gentlemen. I wish that I could tell you that everything was entirely lovely and all right, but I feel that I must report it to you as I see it, give you honestly and directly our interpretation of the situation.

I think perhaps our legal advisor will discuss the bills briefly with you, the ones about which we are particularly anxious. I wish to say in conclusion that we as usual appreciate all the good work that has been done by the men out on the front as you men are. I have said before many times, and I wish to reemphasize, that it is very heartening and the only thing that makes possible doing such work as this is the cooperation that we get from the members of our own profession. Believe me, it is heartening when you come to our assistance at any time we call for it. And I wish to state to you that when that condition ceases to exist, gentlemen, your Legislative Committee will not be able to function. Thank you very much. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. Murray.

Mr. Hassard will please follow with his report. Mr. Hassard!

REPORT OF LEGAL COUNSEL

MR. HASSARD (Peart, Baraty & Hassard): Mr. Speaker, members of the House of Delegates: I will summarize for you, in quite brief digest fashion, two of the bills that are now pending before Congress which have a direct bearing on the possible future pattern both for the practice of medicine and the operation of hospitals. The first one is the bill to extend the present Hill-Burton law, which provides Federal financing for the construction of hospitals and related facilities. The bill is H.R. 8149. It provides for the extension of Hill-Burton financial aid to hospitals for the chronically ill, for rehabilitation facilities and for nursing homes. So far so good.

Those provisions that I have just mentioned have received and have the support of both medicine, hospitals and other interested groups. In addition, however, H.R. 8149 contains a fourth classification that is defined in the title simply as "diagnostic or treatment centers." The bill contains the provision that for its first year, which would be 1955, the sum of \$20 million is appropriated as grants for the construction in various parts of the country of diagnostic or treatment centers. I wish to point out that under the Hill-Burton law and this extension, the appropriations are annual affairs. It is not just a \$20 million appropriation; it is a continuing year by year appropriation. The Congress can later change, up or down, but seldom does.

The bill defines a diagnostic or treatment center as follows: "The term 'diagnostic or treatment center' means a facility for the diagnosis or treatment, or both, of ambulatory patients (1) which is operated in connection with a hospital or (2) in which patient care is under the professional supervision of persons licensed to practice medicine in the state." That ends my quotation.

Further the bill sayeth not.

Under its terms it is clear that the final determination, if it becomes law, not only of what is a diagnostic or treatment center, who may own same, what practices may go on, and the nature of the care, but the whole gamut of their operations will be left up to administrative discretion and determination in the Department of Health, Education and Welfare in Washington.

The second bill is authored by Representative Wolverton of New Jersey, who holds the extremely important position in so far as medicine is concerned of chairman of the House Committee on Interstate and Foreign Commerce. Now strangely as it may sound, legislation affecting public health in the House of Representatives goes to the House Committee on Interstate and Foreign Commerce, the reason for that being that the power of the Federal Government to regulate and to legislate in the field of medical services or hospitalization stems from the commerce clause of the Constitution.

Mr. Wolverton's bill is H.R. 7700. It provides for the insurance by the Federal Government of mortgages issued by banks or insurance companies for

the purpose of financing the cost of construction of hospitals and medical facilities if such hospitals or medical facilities are used in connection with voluntary prepayment health plans. It provides the extremely modest sum of \$1 billion as the authorized amount of mortgage insurance. Hence, \$1 billion under it could be owed to banks or insurance companies and the credit of the United States of America would be extended to those lending agencies to make certain that they would be repaid with interest at 6 per cent no matter what happened in the future in the operation of the hospital or clinic.

The bill defines a "voluntary prepayment plan" as one in which a group of physicians operates a group practice in conjunction with a clinic or hospital and under which the group sells to the public prepaid medical care and prepaid hospital care obtainable through the physicians employed by the group and through the hospital facilities so constructed.

As the bill is drafted, none of the voluntary health insurers in this country that operate on a free choice basis—by that I mean all of the commercial insurance carriers, all Blue Cross plans, all Blue Shield plans—none of them could qualify because they do not restrict the right of their policyholders or subscribers to the receipt of medical care from a particular group or their hospitalization from a particular hospital.

I think it is evident from that very boiled-down summary of the bill that if it became law there would be a terrific and rather immediate expansion of both closed panel medical care and closed staff hospital services.

The bill is now being heard in public hearings before Mr. Wolverton's committee. It is receiving vigorous and strong support from certain quarters and very careful attention from the House Committee. Thank you. (Applause.)

SPEAKER CHARNOCK: Thank you, Mr. Hassard.

The report of the Committee on Public Policy and Legislation will be referred to Reference Committee No. 1.

At this time we will have the supplementary report of the Committee on Public Relations. Mr. Ed Clancy.

REPORT OF THE PUBLIC RELATIONS COMMITTEE

MR. ED CLANCY: Mr. Speaker, Mr. President, members of the House of Delegates: This is a brief report of your Public Relations Department presented at the end of one year as you are about to embark upon major policy decisions for the coming year. The decisions you make will, in our opinion, be carried out in a vastly improved public relations climate and will be accepted by a public which has come to appreciate the integrity of the profession, integrity generated by a record of performance. Social and economic pressures revolving around the problems of the delivery of medical care and its payment are not to be confused with the performance of the

personal physician or the collective reputation of the profession.

Representatives of the Public Relations Department have been invited to numerous meetings of the profession in all parts of the state in which voluntary health insurance matters have been discussed. Our part has been to give information, to tell about the actions of other physicians in meeting their local problems. We have avoided meticulously any attempt at direction of the policies, believing that overall decisions are best made by the profession, our job being to implement them once they are made.

In the matter of voluntary health insurance coverage, however, we would like to call attention to a factor often overlooked by the profession. That is that once all employees of a large industry in a comparatively compact community avail themselves of the prepaid medical coverage, that area soon becomes a most barren territory for cultists. The profession, while probably making certain fee sacrifices, is performing a greater service to the gullible, that of actually protecting them against their own ignorance.

Throughout the state your department has given its assistance and encouragement to county societies in establishing twenty-four-hour emergency medical care, making medical care available regardless of ability to pay and establishing public service committee forums where misunderstood patient relationships may be resolved.

This grass roots program is in operation, active operation. For this cooperation we wish to thank the many conscientious physicians in all county societies, large and small, who have made the record possible. The importance of the cooperation of your Executive Secretaries in the larger societies cannot be overemphasized.

Following a fundamental public relations concept of first being good and then telling about it, professional announcements in practically every newspaper in California have made the public aware of your emergency medical care service and the availability of your Public Service Committees. This program of professional advertisement will again be offered to county societies during the coming twelve months.

Copies of the advertisements and many other public relations tools for the profession are on display in our booth in the Galeria. We wish to call your particular attention to our new series of pamphlets on health insurance, fees, emergency medical care and other current subjects. Given the widest possible distribution, we believe they will assist in promoting an even better understanding between you, the personal physician, and your patient.

Along with newspapers, radio and circulars, television is playing an increasingly important part in carrying the message of the personal physician to the public. Your department has assisted in launching these programs in various parts of the state. This new medium is being used or its use contemplated all the way from San Diego to Eureka. Public response in all communities has been far beyond the

professional expectations. The reason is obvious. The public is pleased and delighted to witness the humanizing of the profession and amazed as one writer put it, at the willingness of the profession to give freely from its storehouse of medical knowledge.

The California Medical Association is a co-sponsor of a program originating in Los Angeles and viewed throughout most of Southern California. The mail response indicates why it commands the largest audience of all sets tuned in of the six stations on the air at that time. Up until today's presentation which goes on the air at noon, forty-one previous programs have produced 5,297 laudatory letters. One hundred twenty-three physicians, general practitioners and specialists have appeared on the program. In preparation they have devoted a total of 984 man-hours of their time and service to the general public.

The value of the production, including time and production cost has been—had it been purchased on a commercial basis, would have been in excess of \$40,000.

Incidentally, one youngster wrote, "Please send me a digest of all the adventures of the doctors on your great TV show." (Laughter.)

Many programs have called attention to C.M.A.'s *Health Record* as offered viewers at no cost. Nearly one million California families now use the record to check on their children's health. This letter came from the school nurse of the San Dimas Elementary School District, and is indicative of the reasons for the record's widespread usage.

She said, "Thank you for your prompt reply to my letter asking for the 400 copies of the *Health Record*. The principal and the teachers are very enthused about using them at the end of the school year. We will fill in the information that has been accumulated on their school health records at the end of the school year, when the children take the records home.

"The program 'Ask Your Doctor' is one of the best I have ever seen on television. We try never to miss it. Hope you can keep it on TV for many years."

All of these televised programs are on a public service basis, the station supplying the time, the profession the talent. It is our hope that we may have your continued cooperation in maintaining position. Sponsorship, despite some of the other state association policies, in our opinion indicates a weakness. Commercialism, we are positive, is not in keeping with the dignity of the profession.

In addition to the encompassed and varied services provided routinely for the county societies and best known to the county society officers, on April 25 in this same room we had the unusual pleasure of working with the leaders of the Student A.M.A. in presenting the first annual Public Relations and Office Management Convention for students, residents and interns.

Twelve of your colleagues spoke before an audience of more than 300 young men and women who will soon take their places beside you. The speakers expressed the ideals of the profession and the oppor-

tunities for public service in the private practice of medicine. We believe the meeting was of great value from the standpoint of the public relations within the profession, the welding of the professional ties between the man in practice and the young man about to enter practice. If the Council agrees, we hope to assist in establishing two similar meetings each year, one in Los Angeles and one in San Francisco.

All our efforts, of course, are external. We are the non-professionals. The finest accomplishments are the internal public relations of the profession starting with the professional doctor and the individual patient. The doctor by word and action proves his personal interest in the patient. We heartily agree with a former county society president who stated, "I do not feel that the society should go overboard on spending money on public relations. The best public relations a physician can have is a satisfied patient."

During the past year it has been our pleasure to assist in some of your internal public relations successes through our work with the blood bank Commission, Medical Services Commission, California Physicians' Service, Public Health League, Postgraduate Committee, Rural Health, Audio-Digest and the Cancer Commission. Without meaning to detract from any of the other groups we believe that the work of the California Cancer Commission has been nothing less than magnificent. It is perhaps no coincidence that the insignia for the cancer researchers is a two-edged sword, one cutting into the darkness of the unknown and the other equally sharp slashing away at the cultists and charlatans who for money offer false and unfounded hopes to their patient victims. Your Cancer Commission has given a recent demonstration of its ability to use this second edge in its protection of the public.

For these and many other accomplishments of the profession it goes without saying that we are proud and privileged to be associated with you. Respectfully submitted. (Applause.)

SPEAKER CHARNOCK: Thank you, Mr. Clancy. This report will be referred to Reference Committee No. 1.

Are there any other standing committees which wish to make supplemental reports at this time?

... There was no response. ...

SPEAKER CHARNOCK: At this time then we will have the report of one of the special committees; the Delegates to the American Medical Association, by Dr. H. Gordon MacLean. Dr. MacLean.

REPORT ON DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

DR. H. GORDON MACLEAN: Mr. Speaker and members of the House of Delegates: As chairman of the Delegation to the A.M.A. from the C.M.A. I wish to report that you have a very active, enthusiastic delegation. You also have some very enthusiastic alternate delegates.

Meeting in June in New York, all of your twelve delegates were there. Some seven alternate delegates attended the meeting in St. Louis; all of the twelve delegates were not there but several positions were taken by your delegates, among them Dr. Norman O'Neill and Dr. Burt Davis, and very admirably I must say.

Your delegation works very much like your Council. During the convention, you know, your Council meets every morning here at half past seven. Your delegation to the A.M.A. does the same thing and at that time the various problems of the day and various resolutions are taken up and each individual is assigned to a job; some committee, perhaps, to attend and to report on it the following day. This is the way your alternates gain experience and their education perhaps for future position as delegate.

Now it is a little bit expensive to send your alternates back there. Some of them have gone back each year. I will say that in the past year all of the delegates have gone back. It may not be necessary to send the alternates back to each meeting. I personally believe that if the alternate delegate were sent back to one meeting during his term, his two-year term as alternate, that would be sufficient to give him a good, thorough education of his duties of the future delegate to the A.M.A.

Your delegation does its very best to carry out your wishes. You may find that some of your resolutions have had a little face lifting and have been changed from the time they were presented to the House of Delegates at the A.M.A. The reason for this is that there are many times we believe it is a little wiser from the public relations standpoint to change the expression of certain words.

Inasmuch as at times resolutions put into this House are delayed for a period of six months, you may find that your resolution is not put in even though it was passed. That is only because the resolution has already been passed upon and been put in from some other organization and would do no good to be put in at that time. We are very well represented by Dr. Murray as the Board of Trustees and chairman of the Board, and Dr. Vincent Askey as the Vice-Speaker of the House.

We learn a lot of little things around the A.M.A. We don't get a great opportunity to attend the scientific meetings but I learned a couple of scientific facts while I was back there. One of them I learned I think in the American College of Badgemakers. I don't know if that is the official name but it might well be that name, and that was if you put the badge on your right lapel instead of your left the other individual could see it very much more plainly. This was pointed out by the Public Relations Department of the A.M.A.

Another thing I learned how to do very scientifically is how to wash one of these fast-drying nylon or dacron shirts. You don't have to put it in the bowl at all to wash it. All you have to do, before you go to bed at night, is stand under the shower. Take a shower and wash the shirt at the same time, and when you take the shirt off, hang it on a coat

hanger and in the morning when you get up you look just as sharp and neat and trim as anybody possibly could. (Laughter.) I actually saw this demonstrated. (Laughter.)

You see, we do have a scientific approach to things. I assure you that whenever possible I believe it would be wise to promote your alternates to delegates. These men have been trained and at your expense. I believe also when you are adding new delegates, if it is possible—many times it may not be—to have an alternate put into that position of a new delegate after you have spent money to train him. I am very sure that in the coming year you will find that your delegation will be very active and will do its very best to carry out the wishes of this House. Thank you. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. MacLean. This report will be referred to Reference Committee No. 1.

At this time Dr. Donald Lum, chairman of the Auditing Committee, has asked to make a supplemental report. Dr. Lum.

REPORT OF THE AUDITING COMMITTEE

DR. DONALD LUM: Mr. Speaker, members of the House of Delegates: The budget as recommended by the Council has been submitted to Reference Committee No. 2. I would like to cordially invite any member of the House who is interested in any particular item of the budget or who wishes more information to be present when Reference Committee No. 2 studies and passes on the budget submitted by the Council.

SPEAKER CHARNOCK: Thank you, Dr. Lum. This report will go to Reference Committee No. 2 and you will be able to discuss the budget with said Reference Committee No. 2.

At this time we are going to take a recess until 2:00 p.m. I want to extend an invitation to you before you leave as follows: The Los Angeles County Medical Association cordially invites you to attend the ground breaking ceremonies for the new headquarters building of the Los Angeles County Medical Association at 1925 Wilshire Boulevard at 12:30 today. Governor Goodwin J. Knight, Mayor Norris Poulson and other leaders in the city and county government, representatives of the clergy, officers of the C.M.A. and members of the House of Delegates have been invited to participate in observing this milestone in the eighty-third year of history of our Association. The ceremonies will be brief. We do hope that you will be able to honor us with your presence. Signed, J. Philip Sampson, President; Ben Frees, Chairman of the Board of Trustees.

A bus to the grounds of the Los Angeles County Medical Association ground breaking ceremony will be at the Grand Avenue entrance to the hotel at noon sharp.

If there is no objection from the House, we will stand recessed.

... The meeting recessed at 11:50 a.m. ...

Sunday Afternoon Session

The Sunday afternoon session of the Eighty-third Annual Session of the House of Delegates of the California Medical Association was held in the Renaissance Room, Biltmore Hotel, Los Angeles, California, Sunday, May 9, 1954. The meeting was called to order at 2:00 p.m. by the Speaker, Donald A. Charnock, M.D., who presided.

SPEAKER CHARNOCK: Will you please be seated, gentlemen, as rapidly as possible, as we are ten minutes late.

Dr. Upton of the Blood Bank Commission wishes to make a supplementary report. Dr. Upton, are you here?

DR. UPTON: Yes, sir.

REPORT OF BLOOD BANK COMMISSION

DR. JOHN UPTON: Mr. Chairman, Gentlemen: The California Blood Bank System sponsored by California Medical Association sent by air last week a shipment of blood plasma and serum albumin to our French colleagues in Indo-China. Your Commission, working with the French Government, has inaugurated a program whereby the French Colony and friends of France in California can send blood derivatives to the ill and wounded French Union forces fighting in Indo-China. California medicine already has received several letters of deep appreciation from the Consul General in San Francisco and Los Angeles and from the garrison in Indo-China for its aid in saving the lives of the wounded.

Thank you, sir. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. Upton. That report will be sent to Reference Committee No. 1.

Is Dr. Lester Magoon present?

... There was no response. ...

SPEAKER CHARNOCK: Are there any other reports from the special committees? While we are awaiting the report of the Medical Services Commission we will take up an item which was left off your agenda, report of Reference Committee No. 2, Dr. Robertson Ward.

REPORT OF REFERENCE COMMITTEE No. 2

DR. ROBERTSON WARD: Mr. Speaker, Members: This is the proposition that was left over from last session, not declared an emergency. It is the report of Reference Committee No. 2.

To this committee was referred one resolution. They introduced it at the 1953 Interim Session and it was not regarded as an emergency at that time. This report contains recommendations of the committee on this resolution. This was Resolution No. 3 of the last session introduced by Dr. William Bender of San Francisco which reads:

"WHEREAS, The need of funds has become urgent for purposes vital to medicine, particularly the support of medical schools dedicated to free enterprise and to non-government control; and

"WHEREAS, The trend of dues in our organization on all three levels is ever upward and never downward; and

"WHEREAS, Opulence has led the California Medical Association into ways of extravagance; therefore, be it

"Resolved, That this House of Delegates, without presuming to invade any function of the Council, desires the adoption of the following practices of reasonable economy, in the best interests of medicine in general and of our dues-paying members in particular:

"1. Discontinue the practice, almost unique in state associations, of sending our twelve alternates to either session of the House of Delegates of the American Medical Association annually, as observers, with all expenses paid—travel and \$25 per diem from the time of departure till return—at an approximate annual cost of \$6,000.

"2. Discontinue the \$6,000 annual salary of the Editor of the Journal, also an indulgence shared by few state associations on a comparable basis, a practice which was intended to make possible the employment of a full-time physician-employee with a record of long service in our Association, and not to single out for compensation one among hundreds of our members, also active in practice, who devotes at least equal time and effort without thought of remuneration; and be it further

"Resolved, That the saving of approximately \$12,000 annually shall, if practicable, be applied to the support of medical schools through the American Medical Education Foundation, to supplement voluntary contributions by our members, or to the reduction of dues."

The committee has studied this proposition and reached the following conclusion: With regard to Item 1, we would suggest to the Council the advisability of considering whether almost as an efficient indoctrination of the alternate delegates to A.M.A. might not be accomplished by permitting half of the alternates each year to attend the regular session so that in each two-year period all the alternates would have an opportunity for indoctrination. This suggestion is made to the Council for its consideration and therefore neither presumes to, nor does, invade the function of the Council.

It is the feeling of the committee that regardless of the number of state journals that employ physicians part time as editors, the salary of the editor of CALIFORNIA MEDICINE does not fully compensate him for the time taken from his practice given to editing the Journal. There is excellent precedent for the payment of a decent salary to the Editor of our Journal, for time spent in editorial duties while in the practice of medicine. It is felt that the decision on this salary was reached by the Council after due consideration and that the Council should continue to set the salary of the Editor at a level which it considers just and befitting.

Regarding the second resolve, it will be recalled that the House of Delegates of the California Medical Association voted down a donation by the C.M.A. to the A.M.E.F. at the May meeting in Los Angeles when such a proposal was made by this same committee. If it was considered inadvisable at that time, the mere fact that \$12,000 would be made available by this resolution does not make it any more right now.

Mr. Speaker, I move the adoption of this report. . . . The Chair was assumed by Vice-Speaker Bailey. . . .

VICE-SPEAKER BAILEY: Thank you, Dr. Ward. I take it this is the unanimous report of your committee and therefore it has already been seconded?

DR. WARD: It is.

VICE-SPEAKER BAILEY: Under those circumstances, is there any discussion on the adoption of this report?

DR. LUM: Mr. Speaker.

VICE-SPEAKER BAILEY: Dr. Lum.

DR. LUM: In the resolution that was submitted to the House of Delegates the term "unique" was used as unique in the editor of our Journal being paid as comparable journalists. That is not quite so. I would like to quote the salaries of the part-time editors for comparable journals. *New York State Journal*—the part-time editor who spends one day a week receives \$7,200. I will brief this. The total salary for the editorial staff of the *New York Journal* is \$27,104 a year.

The *New England Journal*, of course, is a weekly journal. The editor's salary there, who works full time, was \$12,500 and it has been raised. The total expense of that journal for editorial work was \$25,262.

Pennsylvania Medical Journal—the editor serves part-time and receives \$5,000 yearly. He has a part-time assistant at \$4,000. Total editorial salaries, \$17,250.

CALIFORNIA MEDICINE editor's salary, \$6,000, full-time assistant to editor, \$8,100. One part-time assistant, \$3,000; total editorial salaries, \$17,100.

So I am sure you see that the amount that is paid to the editor of CALIFORNIA MEDICINE is not out of line.

I urge the report of the Reference Committee be accepted.

VICE-SPEAKER BAILEY: Dr. Cline.

DR. CLINE: Dr. Lum has given you some important information with reference to other states. It so happens that I as an individual and representing the Council was one of those responsible for retaining the present editor. I hesitate to bring personalities into a discussion but I don't see how, since an individual who holds a particular job cannot be unidentified, one may avoid personalities. As of the time that Dr. Wilbur took over the Journal the preceding part-time editor who had become a full-time Secretary and Editor of the C.M.A. had a salary of \$12,000. Prior to his assumption of the duties of

Secretary he had a salary as Editor of the Journal of \$4,000.

During the war there was the realization that *California and Western Medicine*, as it was then called, was not of the standard which we desired to be representative of the California Medical Association and its standards of medicine. The Council decided that changes should be instituted. It asked me and in this room I propositioned Dr. Wilbur to become Editor of the Journal—to become Editor of the then Journal which became CALIFORNIA MEDICINE.

It was with considerable reluctance that Dr. Wilbur agreed to accept that position. He had to be assured that many things which he felt had been difficulties existing in the past would be eliminated before he would be willing to agree to that. Finally I got his consent to accept that position.

I went back to the Council and so reported, and was again designated as the individual to conduct the negotiations with Dr. Wilbur relative to the compensation. Dr. Wilbur said that if he were in a position to do so he would gladly undertake the position without compensation of any variety. On the other hand his situation with reference to practice did not justify his taking the time away. We had luncheon together and as an experimental matter—and it was thoroughly understood by the Council and Dr. Wilbur at that time that this would be an experiment—with reference to the amount of time which would be required. He did not know nor did any of the rest of us know the amount of time which would be required. And a compensation was set on an experimental basis of \$3,600 a year.

As time went on it was obvious that the demands upon Dr. Wilbur's time, because the Editor must read every single item which goes into the Journal. The Editor's position is quite different from that of an elected officer of the Association. A member of your Council may devote a great deal of time, particularly the chairman. Your President-elect and your President give very generously of their time but when they undertake those jobs they know what they are letting themselves in for and those are jobs which participate in or are important policy-making jobs. They are jobs which can be done at odd times according to the convenience of the individual.

There is no deadline as of the 10th of each month when all of the editorial material must be in the hands of the printers so that the Journal may come out on time. That is the situation which confronts an Editor of the Journal. His situation is not in the least comparable to that of officers who do other things.

I think that you heard Dr. Lum's comparison of compensation of the Editor of our Journal and it certainly is not out of line with comparable journals.

As I mentioned earlier, as of the time that he took over the Journal it was one which we could not look upon as reflecting credit upon the California Medical Association. I have heard many compliments indirectly and some directly given to Dr. Wilbur for his excellent conduct of the Journal and the stand-

ards which it has achieved. It has become, I think without reasonable question, the foremost state journal in the country.

I think that perhaps the only regional journal which might be said to occupy a higher position in the estimation of medical people is the *New England Journal* but the *New England Journal* devotes itself almost exclusively to scientific matters. It has therefore a different orientation from our journal, which must concern itself very largely with organizational things. I think that the general approval and recognition and the rise in the esteem of CALIFORNIA MEDICINE in the minds of doctors all over the country can be laid almost solely at the feet of Dr. Wilbur, and I think that there is no excuse for this House to consider anything other than the approval of the Reference Committee's report. (Applause.)

VICE-SPEAKER BAILEY: Dr. Cline, is there any further discussion?

Dr. Bender, what is your report?

DR. BENDER: Mr. Speaker, ladies and gentlemen: Surprisingly enough, I am not going to argue; I am just going to present facts.

Mr. Speaker, I suggest since there are three propositions in this resolution that they be considered by the House separately. The Editor proposition has been started on and I suppose we had better continue that and then go back to the question of alternates and to the last of our items, what to do with the saving, if any. Does that meet with your approval?

VICE-SPEAKER BAILEY: Yes, that is quite satisfactory. Then we all know what we are talking about.

DR. BENDER: I want to make it clear in the first place my resolution was presented entirely on a factual, nonpersonal basis. I want you to know there is no one who respects the Editor more than I do and appreciates the good job that he is doing. So this is a factual and nonpersonal presentation.

My interest was attracted first to the question of savings in the operation of California Medical Association when last year I got a telephone call from Stockton from the secretary of the Committee on Postgraduate Education, asking me to go down to Merced and talk on a program for the remuneration of \$50. I went but I didn't take the \$50. I am old-fashioned enough to believe in my Hippocratic Oath and I did not accept an honorarium. I went on my own.

The other thing that called my attention to the spending of our dues-payers' money was the recommendation of Reference Committee No. 2 last year which requested an assessment of \$25 over and above our regular dues for the support of the American Medical Educational Foundation. As the chairman of that committee has said, this was turned down roundly by the delegates, but it wasn't turned down because of the principle. It was turned down because we felt that we did not have either the legal or the moral power to assess our members for such an amount each year to go for such a purpose.

That the principle was approved is proven by the fact that the C.M.A. sent the constituent county so-

cieties contribution forms to fill out in order to encourage members to contribute voluntarily to this very laudable movement.

Then last year, the first of 1953, the Editor's salary was raised from \$3,500 to \$6,000 and I began to delve around to see just how expenditures were being made and explained. So I explored the field in general and found two areas which I thought were soft as far as extravagance was concerned. One was the routine practice of sending all alternates to the A.M.A. meetings at the expense of the California Medical Association. The other was the salary of the Editor. I looked up all the information I could locally and I made two inquiries, one in November, 1953 and another in March 1954 to all of the other 52 constituent societies of the American Medical Association.

I got a surprising 100 per cent return on the first, which shows extreme courtesy on the part of the officers of the other societies and also probably a little interest in the subject. In the March survey, out of 52 inquiries I got 48 returns. And the results were rather revealing. You may wonder why there are 53 constituent societies when there are only 48 states but they include, of course, Alaska, Hawaii, District of Columbia, the Canal Zone and Puerto Rico.

The results of the survey boil down to something like this: Out of the 53 Associations, including the California Medical Association, there are 38 Associations which have their own journals. One journal, *Northwest Medicine*, supplies four states, and another, *Rocky Mountain Medicine*, I believe they call it, published in Denver, serves five state associations. The rest have no state journals. So far as these statistics are concerned, we are dealing then not with 38 constituent societies but the status of 38 editors, and all these editors are physicians. Of the returns I received, only two of the editors of state medical journals throughout the country are not physicians.

So this concerns the salaries of 38 editors who are physicians. Of those 38, 26 receive a salary. Of those 26 the mean annual salary is \$1,800. There are 12 who receive no salary for their services as editor. If those 12 zeros were included, the mean salary would be \$1,200. The average for the 26 is \$2,449 and the average for the 38 is \$1,675. It is quite true that there is one state society, as Dr. Lum has said, which does pay \$7,200 a year, but that is the only one which does. The others pay less than California's \$6,000 per year.

A number of considerations go into this question which I am not going to explore. I said I want to make this factual, and it is quite true that the Editor has certain duties. He is bound to have, and from my sources I understand he puts in an hour and a half a day, which would be a work-day of seven and a half hours a week. I can't believe that the holder of this job is any different from one who is appointed by the Council to work on a fee schedule committee over a period of years, to head the committee on civil defense, as instances which require a lot of time and a lot of travel and a lot of interrup-

tions, because there isn't any distinction between the work. We are all working for California medicine whether we are an editor, an officer, councilor, delegate or committeeman.

Of course we have a good journal and one of the best, but in my book remuneration shouldn't depend on the quality of service that you give to your fellow doctors. If you want to have some examples a little bit different than those of Dr. Lum, I can cite you for instance *Minnesota Medicine*, which has the same system as ours, that is an editor-in-chief, an editorial board of assistant or associate editors consisting of a large number of specialists who review papers critically and submit them to the editor for final acceptance or rejection. That editor gets no salary from *Minnesota Medicine*, which is a pretty fair medical journal.

Northwest Medicine serves four state associations. The editor is not only scientific editor, he is also the managing editor and he gets \$4,800 a year, and his secretary writes that he puts in between 25 and 35 hours a week.

The *Rocky Mountain Medical Journal*, which serves five states, pays its editor \$1,800 a year.

Illinois, which is a pretty fair sized community, and I have looked at the journal and I understand it is pretty good, pays its editor \$3,000 a year. They pay that to a man who has acted as the secretary-treasurer and editor for many years, 36 years I believe it is, only since his retirement from active practice in order to give him a chance to keep his hand in.

I am perfectly willing to move the deletion of the whereas relative to discontinuation of the salary for the editor, but do believe that this House of Delegates and perhaps the Council when they are considering in the future the expenditures of monies for things of this kind might keep in mind these facts that I have accumulated. So I move the deletion of the resolve relative to the discontinuation of the editor's salary.

VICE-SPEAKER BAILEY: Thank you, Dr. Bender. The Chair is in a little doubt because we seem to have discussed all three things, but I take it to be your thought that you would like to divide it up into three different parts. Is that all right, Dr. Ward?

Well, chiefly it is a matter of keeping it clear before this body. So far we have talked about discontinuing the \$6,000 annual salary of the journal editor, and we have had nothing but arguments in favor of the committee's report, which is that the resolution do not pass. Is there any further debate?

Dr. Bender, if I have misunderstood it I would like to have you straighten it out now.

DR. BENDER: Mr. Speaker, there seems to be some sentiment among those who have spoken and in the report of the committee and of Chairman MacLean of the A.M.A. delegation, to compromise the matter of sending all alternates to A.M.A. meetings.

I think it would be a mistake to defeat the whole resolution by approving the committee's report without discussing the question of sending the alternates.

VICE-SPEAKER BAILEY: Well then, Dr. Bender, we are all understood we are talking about only the editor now and we have so far had nothing—is that correct?

DR. BENDER: That is true, and I move the deletion of the whereas which provided for the discontinuation of his salary.

VICE-SPEAKER BAILEY: Would you like to speak, Doctor? What are you going to discuss?

DR. CAMPBELL: The same thing, the editor.

Mr. Speaker, the course of Dr. Bender's remarks changes my aspect completely. I am not going to talk about Scotland today. However, I am going to talk on finance and I believe when we look into the situation of the editor the small sum of \$6,000 I think is too small. I do not know anyone who would wish to take this position for \$6,000 a year, especially since the journal has been raised in standard far beyond what it was possibly a few years ago.

I would hate to take issue with my old friend Dr. Bender on some of these things but do not let us forget that the love of money is the root of all evil and sometimes when we consider that money should be scrimped, eventually we have to pay much more before we finish. In education it is very important in the whole field of medicine that men be trained. Now sometimes it doesn't mean that we have to be trained in one particular subject at all. It means throughout life. If we are at the bottom, in a hard way, where finance is constantly presented for us we have to fight our way through and win out. Therefore I believe if we start cutting a few thousand dollars for editor and for alternates, we'll be doing an exceptional and great harm to this great state of ours.

Eventually, in a very few years, this state is going to supersede all others in population and in all respects. Now I therefore wish at this time to talk against all the cutting of expenditures for editor or for alternates. Thank you. (Applause.)

VICE-SPEAKER BAILEY: Thank you, Dr. Campbell. There will be no further debate on this subject. I will put the question to the House by considering Dr. Bender's suggestion in the way of amending the resolution by deletion. We have deleted that part about the editor. Do I hear a second to that?

... The motion was seconded. ...

VICE-SPEAKER BAILEY: There is. Then any further discussion on the part about the editor? All those in favor of deleting that portion of the report will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: The "ayes" have it and it is carried.

Now we go to the main portion of the report which deals with alternates. Part of this has already been discussed. Any question on the delegates? Dr. Bender.

DR. BENDER: I just have some more facts for you again as a result of these polls. Of the 53 constituent

associations of the American Medical Association, 10 associations send all delegates and alternates with expenses paid to meetings of the American Medical Association, including California. Forty-three do not. A rather sad side commentary was offered by Michigan in its return with the simple statement: "A California M.D. talked us into it." (Laughter.)

There are a number of statements that have been made and will be made relative to the importance of orientation of alternates. The committee in its report twice said "indoctrination." I am very sorry they used that term because it gives the impression that the new men are going there to be taught how to think and act rather than to be informed, and I don't think the committee really meant that.

The statement has been made, too, that there are too many reference committees in the A.M.A. sessions for all of our delegation, now thirteen, to attend. I checked that too and there are fourteen, so they would just miss one with thirteen delegates without any alternates.

The question of orientation and preparing an alternate to take the place of his delegate when that delegate retires has been investigated with very interesting results too. I went back over the last eleven years, 1943 through 1953, and I found that the delegates changed ten times and that they were succeeded by the alternates twice, two out of ten in eleven years. That is not including one man who had been an alternate and was subsequently made a delegate in the section of Military Medicine, which hardly represents the California Medical Association.

VICE-SPEAKER BAILEY: Dr. Bender, the Chair doesn't like to interrupt but I didn't understand that. Would you repeat it, please?

DR. BENDER: Yes. During the last eleven years, from 1943 through 1953, according to C.M.A. records, there have been fourteen changes in the alternates. That is fourteen men as alternates have dropped out or died or got tired. (Laughter.) At any rate their names are no longer on the alternate list. Of that fourteen, only two have replaced delegates so that the succession is two in fourteen.

However, during that same time there were ten delegates whose terms ended and who finished their service for some reason or another, seven of whom were replaced by new men, not their alternates. So the statements relative to the training and proving ground of alternates to take the place of delegates as a reason for sending all alternates back to the A.M.A. sessions is not based on fact, as the records here show.

There are a number of other things but, as I say, I am just presenting facts today, so I would offer a substitute "resolve" for that relative to discontinuing the practice of sending the alternates. This is the substitute resolve:

"Be it Resolved, That alternates not substituting for delegates may attend the least distant of the two A.M.A. sessions at C.M.A. expense every other year."

Thus each alternate will gain experience by attending these meetings preferably in staggered fashion so that approximately half of our alternates will attend each year.

VICE-SPEAKER BAILEY: Thank you, Dr. Bender. You have made an amendment then.

Dr. Lum will speak to it—Is there a second to the amendment? Second to Dr. Bender's suggestion?

... The motion was seconded. ...

DR. LUM: Mr. Speaker, members of the House: As a matter of information in the budget prepared by the Council and referred to Reference Committee No. 2, it was a recommendation of the Council that each alternate go to one session during his two-year tenure of office. The reduction in the budget reflects that.

VICE-SPEAKER BAILEY: Dr. Cline.

DR. CLINE: I hesitate to inflict myself upon you again. I am speaking in a dual capacity or perhaps one could say a triple capacity, one as a member of the California Medical Association, one as an Honorary member of the Michigan State Medical Society (laughter) and as a past delegate and past president of the American Medical Association. I am the one who was facetiously referred to in the remark which Dr. Bender made. (Laughter.)

As an honorary member of the Michigan Society I was asked to include in my remarks to their House of Delegates what I thought the value of sending alternate delegates might be. It was upon the basis of that opinion that the Michigan delegates considered that the value that the delegation from California had been to American medicine, that upon the estimate which I gave them of the value of sending our alternate delegates, the Michigan State Medical Society took the action to send its own.

Now there is a lot more to this situation than has been outlined. If I may take your time for a moment to go into a bit of history which some of the younger members of this House may not know—ten years ago there began a revolution in the American Medical Association. Our delegation at that time was composed of some of your still present delegates, not many. It was composed mainly of people who had grown old in the service and no longer represented the thinking of the California Medical Association.

As of that time your former chairman of the Council, Dr. Ed Bruck, introduced a resolution to dispense with the services of Morris Fishbein as editor of the *Journal of the American Medical Association*. That began the revolution. It became essential that our delegation be changed at that time in order to accomplish a number of very worthwhile things.

That project was won and that was essential to accomplish the remainder. The remaining projects were to get a fine, active, thorough Public Relations Department in the American Medical Association. Number three was to get a good representative office in Washington. Number four was to get real, vigor-

ous support on a national basis for voluntary health insurance. That was the California program.

Dr. Murray, who is now chairman of the Board of Trustees of the A.M.A., was the chairman of your delegation. A number of us were members of it. It took a long time. If it hadn't been for the rapidity of events it would have taken much longer to accomplish those changes, which were so apparent to us due to the unfortunate experiences we had had here in California, to bring about a real reorientation of the A.M.A.

The A.M.A. is a much different organization today and it is much different primarily because of the leadership which was furnished by the California Medical Association through the representatives which it sent to the A.M.A.

When it began to send its alternates, because numerically your representation is important—it isn't only a matter of training ground, it is a matter of the people who are there on the scene at the time. Dr. MacLean explained to you this morning the way in which the California delegation has operated ever since I have known him, a matter of meeting every morning at breakfast, a matter of discussing all the issues, a matter of assignment of tasks, a matter of reporting the following morning, a matter of decision on the part of the delegation on the action it is going to take. It has been repeatedly said by many people that by far the most effective delegation in the House of Delegates of the American Medical Association has been that from California.

Numerically inferior to New York still but to no one else, numerically inferior at the outset to about four or five different states, yet the influence upon the course of American medicine and particularly where American medicine with its back to the wall is incalculable, and that is the result of the California delegation.

Now I am going to speak in opposition to the report of the committee and to the action of the Council. I think that it is extremely important that we send our alternate delegates not only to one meeting in two years but to all four in two years so long as they persist because those men have exerted a tremendous influence on the course of American medicine. If the reports I have heard here, which show the change which had taken place in the California Medical Association in the past few years, are an example of the progress that we are sustaining here and that the rest of the country is lagging behind us, in many respects those men can still render incalculable service to American medicine.

Now the C.M.A. officers sought information concerning the payment of various expenses which are slightly at variance with some of the information that was given to you. Travel and expenses of delegates and of alternates who substitute for delegates unable to attend, "yes" 49, "no" 4; living expenses of delegates and such substituting alternates, "yes" 46, "no" 7; travel expenses of all alternates including those who do not go as substitutes, "yes" 10, "no" 43. So this is not such an unusual circumstance. Living expenses of all alternates, "yes" 10,

"no" 43; travel expenses of your officers who were not delegates or alternates, "yes" 20, "no" 32; living expenses of officers, "yes" 20, "no" 32.

Actually this change in pattern as of this last year is the result of the demonstration of the great service to American medicine which the delegation from the California Medical Association has given, and I plead with you not to deny that delegation the numerical strength, and if you wish, the training period for the alternates. (Applause.)

VICE-SPEAKER BAILEY: Thank you, Dr. Cline. The Chair supposed that the reason you spoke of 49 states is for the same reason we have already discussed, state or territory.

DR. FRASER (Alameda County): I think I am the dean of the alternate delegates, and as Rick Reynolds referred to me two years ago when he nominated me for alternate to Gordon MacLean, he referred to the reserves on the bench. And as I recall the last remarks two years ago, he referred to the splinters that the reserves accumulate. Well, we reservists do not accumulate splinters because the chairman of the delegation puts us to work.

I want to concur in the remarks that Dr. John Cline made. I am at the twilight of my medical career in many senses and one, of course, is as an alternate to Gordon MacLean. It has been my privilege to attend better than two-thirds of these conventions and I think a moment of levity sometimes helps. Sometimes people don't appreciate that levity and fun and contact with delegates create good public relations.

Now I may be wrong in this but there are all kinds of jobs to be done in the delegation, the California delegation, and they have been done, I assure you. Vince Askey and these other men are very serious about attending to the serious part of the thing, but there are certain jobs that have to be done like committee hearings and meeting the delegations and getting acquainted with them, and some of us alternates have had to do that. I want to assure you I have had a lot of fun doing it but sometimes, you know, the best public relations are done in politics and in medicine, through the fine, warm contact that you get with people unofficially. It is certainly done unofficially as an alternate, and I think you would make a sad mistake in overlooking the fact that the small cost that it takes to send these alternates back there is well spent.

Now I agree with Dr. Bender—something I don't very often do. However, I believe that if it is worth while to invest money in your alternates I think you ought to see to it that the figures that he mentioned are not repeated. I think he said two out of twenty or something like that. If an alternate is good enough to be an alternate and be paid to go back to wherever the convention is, I think after the first term, two years, then it is up to you fellows to promote him if the occasion comes to promote him, and if not, kick him out.

I think that the alternates, and I speak on behalf of the alternates, have done a swell job the last few

years, and I think it is up to you whether you want to keep them going or not. But I think that from public relations standpoint, and certainly as far as the stature of the California Medical Association in the A.M.A. is concerned, I think the money is mighty well spent. Thank you.

VICE-SPEAKER BAILEY: Thank you, Dr. Fraser.

Dr. Murray.

DR. MURRAY: Mr. Speaker, and members of the House: I would like to say a few words about the importance of having our alternate delegates at the A.M.A. I think I have been in position to observe what is happening to the California delegation in the past few years. When I became a member of the Board of Trustees in 1945—that's been nine years—I was told then that the California delegation was more powerful than it had been in the past but not so good as it might be.

Today the California delegation is regarded as the most powerful delegation in the A.M.A. Now I say that without fear of contradiction by the members of the New York delegation, the Ohio, the Illinois, Pennsylvania or any of the others. I have been told that repeatedly. They say that if you want a job done, give it to the California delegation; they will see that it is done.

Now, yes, there's a lot of work when the delegation goes back there and it is a question of their efficiency—their efficiency depends a lot on their acquaintance and you don't become acquainted with these delegates in one visit or in one trip to the House of Delegates any more than you get acquainted here. A young delegate, a new delegate coming in here, doesn't get acquainted with everybody the first meeting. It takes a little while. I have talked that over with our own delegation from Napa County.

Now, I realize that we look at the expenses and it means something, true. I am just about as Scotch as any of the rest of you, but we must look at what we are accomplishing and the welfare of medicine, and believe me these alternate delegates' time is not wasted and neither is the money that you spend in sending them back there wasted. I would like to see the same program continued as in the past because it is an advantage to medicine generally and to California particularly.

Thank you. (Applause.)

VICE-SPEAKER BAILEY: Thank you, Dr. Murray.

If the Chair please, it is of some importance to redefine the issues here so you all know what the vote is to be upon. Dr. Ward, your committee recommended or suggested to the Council the advisability of considering whether almost as efficient an indoctrination of the alternates to the A.M.A. might not be accomplished by permitting half the alternates each year attend the Regular Session so that in each two-year period all the alternates would have an opportunity for indoctrination. This suggestion was made to the Council for its consideration and therefore neither presumes to nor does invade the function of the Council.

Now, to that main motion we have Dr. Bender's amendment which is quite specific and looks as if the House of Delegates would bind the Council and leave them without jurisdiction. Therefore it is for this House to decide whether they wish to vote yes or no on an amendment which will make the terms specific. The amendment is now before you—or is there any further debate on it?

Dr. Green.

PRESIDENT GREEN: Members of the House: It might be to your interest to know that in the A.M.A. there are seventeen Reference Committees and at practically every session that I have attended about six of our experienced delegates have been assigned to some one of these Reference Committees and many times as chairman of such. With only thirteen regular delegates seasoned, educated, informed, it is almost impossible for us to do what you would call a good job with thirteen men. So that is one of the reasons why we have seen fit to spend a little bit of your money to reflect credit upon our own House of Delegates.

VICE-SPEAKER BAILEY: Thank you, President Green. There being no further debate on the entire report as amended—we haven't voted on the amendment yet. All those in favor of the amendment as proposed will say "aye." All those opposed to the amendment.

The "noes" have it. The amendment did not carry.

... There being no further discussion, the motion was put to a vote and it was lost. ...

VICE-SPEAKER BAILEY: Then there being no further debate on the entire report, will you move the adoption of the report as amended, Doctor?

DR. WARD: Yes, I would like to move the adoption of the report as amended. Really, the first part of the report has been carried out by your previous vote and I can tell you the reason that the committee reported the way it did is because we didn't feel that we should put any chains on the Council in deciding this matter.

Now, as you have been told, they have already decided to take Dr. Bender's suggestion, reducing the attendance of the alternates, and I would like to move the adoption of the report as amended.

... The motion was seconded. ...

VICE-SPEAKER BAILEY: Dr. Burt Davis from San Jose.

DR. DAVIS: I think we have two things here before us which should be disassociated. We have an economy measure and also we have an appropriation so that I feel that we should delete the last resolve which is the saving should be applied to the support of medical schools, and that should be taken up as a separate point of issue. I should like to propose that deletion.

VICE-SPEAKER BAILEY: Well that is perfectly fair. We divided this thing up in three pieces before, so if anyone wants to speak to that—Dr. Truman, do you wish to speak to that particular point?

DR. TRUMAN: No, I wish to speak to the point of sending the alternate delegates. It is my opinion in discussing this with many of the members of the House of Delegates that the members of the House of Delegates are in favor of sending all the alternate delegates and directing the Council to so do rather than to leave it to the discretion of the Council to send them every alternate year as the resolution as it now stands proposes to do.

VICE-SPEAKER BAILEY: Well, do you therefore make an amendment to that effect the House should so direct the Council?

DR. TRUMAN: I think it should be so made. If it is in order I should so move.

... The motion was seconded. ...

VICE-SPEAKER BAILEY: It is in order. It is moved that an amendment be made to direct the Council to send all the alternates to all meetings. It has been seconded. Are you ready for the discussion? This takes the discretion from the Council.

A DELEGATE: Is that one meeting or two meetings?

DR. TRUMAN: All the meetings.

VICE-SPEAKER BAILEY: All the meetings. This takes the discretion from the Council. The House will vote upon it and it will become mandatory. Any further discussion? Dr. Ward.

DR. WARD: I would like to discuss again—I don't like to direct the Council to do this or do that or not do this or not do that. I think it is the wrong principle, and although I think it is a fine thing to send the alternates to all the meetings, I don't think that as an amendment to this report it should be accepted. I speak on the principle of directing the Council to do this and do that. I think that when we elect the Council to do a job we expect it to do just that and unless it is something that we find that they are doing wrong we shouldn't give them specific directions.

VICE-SPEAKER BAILEY: Any further discussion on whether we shall direct the Council in this amendment? There being none, all those in favor of the amendment will respond by saying "aye." All those opposed?

... There being no further discussion, the motion was put to a vote. ...

VICE-SPEAKER BAILEY: The Chair is in doubt. Will the "ayes" stand, please? Just a minute, a point of information, gentlemen, before we vote. We have to know what we are voting on. The understanding, Dr. Truman, is that the Council shall be instructed to send all of the alternates and all of the delegates to each of the two meetings, am I correct?

DR. TRUMAN: Yes.

VICE-SPEAKER BAILEY: I am correct. That is what you are voting on. The Council will be instructed they no longer have the privilege of deciding, that the House has instructed them to make this movement.

... There was a standing count. ...

VICE-SPEAKER BAILEY: All right. Will the "noes" please stand?

... There was a standing count. ...

VICE-SPEAKER BAILEY: Thank you, gentlemen. Will you sit? The vote is 160 "aye" and 70 "no." Therefore the amendment is carried.

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: Now then, Dr. Davis, that finishes your part of the situation because we don't have money. (Laughter.)

Dr. Ward, would you please continue?

DR. WARD: I don't know where that leaves me. (Laughter.) But I am quite in agreement with—was it Dr. Davis who suggested that we take up these things? I suppose this would call for a discussion and a vote of the House as to whether they favor the contribution by the C.M.A. to A.M.E.F.

A DELEGATE: No, no.

VICE-SPEAKER BAILEY: I think that is not in order, Dr. Ward. We are going too far.

DR. WARD: Then, Mr. Speaker, I am confused.

VICE-SPEAKER BAILEY: That is all right.

DR. WARD: I don't know what I am supposed to do up here.

VICE-SPEAKER BAILEY: Just move the adoption of the report as amended.

DR. WARD: I so move. (Laughter and applause.)

VICE-SPEAKER BAILEY: Does anybody second that?

... The motion was variously seconded. ...

VICE-SPEAKER BAILEY: It has been moved and seconded that the report be adopted as amended. Any further discussion? Those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: The "ayes" have it.

I would like to thank your committee, Dr. Ward, and Dr. Thomas Hill, and Dr. John Vaughan.

Now, gentlemen, we are going to proceed with the Reference Committee No. 3 report but I would like to remind the new Reference Committee chairman that we have already announced the rooms, but it would be to the advantage of the House if before we start the resolutions the rooms and the times of meeting could be posted on this board over here (indicating). So if you wouldn't mind telling Mr. Thomas when you propose to have the meeting and where, the House would be that much better advised.

Now then, we have Dr. Rosenow, who is Reference Committee No. 3 chairman, a hold-over as you will explain, Dr. Rosenow.

A DELEGATE: A point of information. What is the total number of delegates that can vote?

VICE-SPEAKER BAILEY: Three hundred and one.

A DELEGATE: Three hundred and one?

VICE-SPEAKER BAILEY: Yes, sir. Dr. Rosenow.

REPORT OF REFERENCE COMMITTEE No. 3

DR. EDWARD C. ROSENOW, JR.: Mr. Speaker: All of you have copies of the report of Reference Committee No. 3. I will therefore leave out the whereases and give you just resolves and our recommendations.

VICE-SPEAKER BAILEY: Just a minute, Dr. Rosenow, that sounds to the Chair like a good idea. Does anyone object to it?

... There was no response. ...

VICE-SPEAKER BAILEY: So ordered. Proceed, please.

DR. ROSENOW: Resolution No. 1 introduced by Ewing L. Turner. Subject, A.M.A. Judicial Council.

"Resolved, That Division Three, Chapter XI, Section 10(A) (1) be and it hereby is amended to read as follows:

"(1) The judicial power of the Association in matters of broad general policy and the interpretation of ethical principles shall be vested in the Judicial Council whose decision shall be final unless rejected or modified by the House of Delegates. All opinions of the Judicial Council shall be open to inspection by any authorized representative of any constituent society of the A.M.A. at the headquarters of the Association. Any such opinion may be brought before the House of Delegates by any delegate at any of the three regular meetings of the House succeeding the rendition of the opinion. The House may affirm or modify such opinion or return the matter to the Judicial Council for reexamination."

"It is Further Resolved, That Division Three, Chapter XI, Section 19(A) be and it hereby is amended by adding at the end thereof a new paragraph as follows:

"(7) In matters with respect to which an investigating jury is not requested, the Judicial Council shall observe the following procedure:

"(a) No issue between parties shall be decided by the Judicial Council without affording to each party the opportunity to be heard in the presence of each other either personally or by a representative of his choice both orally and in writing. All parties shall be notified of the time and place of hearing in ample time to make the right to be heard effective.

"(b) No opinion (except decision of specific controversies under paragraph (a) above) shall be rendered by the Judicial Council until at least 60 days after the request for opinion (or the tentative opinion if no request has been made) shall have been published in the *Journal of the A.M.A.* for at least two consecutive issues. Any member of the A.M.A. or a designated representative may present his views on such matter to the Judicial Council in writing and, if any constituent or component society so requests, hearing shall be held at which any recognized medical society which desires it shall be heard by a representative of its choice."

"It is Further Resolved, That the California delegates to the A.M.A. be instructed to support this resolution."

Your committee agrees in principle with the content of this resolution and recommends a "do pass."

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: Any discussion on this portion of the report? Dr. MacLean.

DR. MACLEAN: Mr. Speaker, members of the House: I would like to call your attention to the fact that this resolution has already been introduced into the House of Delegates of the American Medical Association and at the present time is in the Committee on Constitution and By-Laws. When they get back there and find that this resolution is already reported on favorably or unfavorably—this perhaps is one of the resolutions that was presented six months ago and at that time wasn't quite adequate or quite desirable, but at the present time there may not be any need to present this resolution.

VICE-SPEAKER BAILEY: Well, Dr. MacLean, will you make a specific recommendation then?

DR. MACLEAN: I would merely make an amendment to this so that if this resolution is not acted upon favorably it be re-presented.

VICE-SPEAKER BAILEY: Doctor, would you like to make an amendment to that effect that if the resolution is not acted upon favorably by the A.M.A. you mean, by the A.M.A., that the C.M.A. then has a chance to re-present it?

... The motion was seconded. ...

VICE-SPEAKER BAILEY: Discussion?

DR. ALESEN: Mr. Speaker.

VICE-SPEAKER BAILEY: Yes, Dr. Alesen.

DR. ALESEN: With all due respect to my chairman of the delegation, Dr. MacLean, I would call his attention to the fact that unless this resolution is adopted by our House of Delegates here and now and instructions given to your delegation of the American Medical Association so to act there will be no opportunity for us to act after a committee of the House of Delegates of the American Medical Association has rendered an unfavorable decision. We are losing our opportunity, in my opinion, which is that it is important to instruct our delegation to press for the adoption of this or some similar resolution.

I will tell you why. There is a certain basic bit of governmental philosophy in here which I think ought to interest you and me very much. Throughout the states, every one of the 48 states, and in the nation as a whole the State Assemblies of the National Congress reserve unto themselves the right to alter and in fact on occasion make decisions by either the Supreme Courts of the states or the Supreme Court of the land. Now one recent instance is the case of our own Federal action overruling the Supreme Court action in respect with the tidelands oil situation. Now, as the Code of Ethics of the American Medical Association now stands it is stated that the opinion of the Judicial Council shall be final, period. All that is requested in this new proposed change, this alteration in the Code of Ethics, is that the judi-

cial opinion or the opinion of the Judicial Council shall be final in matters of general policy and the interpretation of ethics unless altered by action of the House of Delegates.

Now that particular provision is merely reclaiming for the House of Delegates of the American Medical Association the right which it originally gave to the Judicial Council and the right which in my opinion it ought properly to reclaim in the instance of being parallel to our general concept of American jurisprudence.

The other matter of resolution is somewhat secondary; it has been charged, I believe with some degree of truth, that the present Judicial Council is somewhat arbitrary in the manner in which it conducts its hearings and also has been somewhat difficult to approach with respect to giving reports on results of those hearings. Therefore, gentlemen, I urge that you support this resolution as recommended by the committee.

VICE-SPEAKER BAILEY: Dr. Alesen, you are urging that the amendment not pass?

DR. ALESEN: Yes, sir.

VICE-SPEAKER BAILEY: What we are voting on exactly here, your committee reasons principally with the concept of this and recommends that you pass, and the resolution is to instruct our delegation—I beg your pardon, I was going to ask Dr. MacLean the same thing he is going to ask me, to instruct them to support the resolution. Do you suppose we could leave it there, Dr. MacLean?

DR. MACLEAN: Mr. Speaker, with that explanation of Dr. Alesen's I would be very happy to withdraw my amendment.

VICE-SPEAKER BAILEY: The amendment is withdrawn. Thank you. We are all in harmony again. (Laughter.)

Then we go back to the "do pass" recommendation. Is there any further debate? There being none, all those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Rosenow.

DR. ROSENOW: Resolution No. 5, introduced by Carl M. Hadley, San Bernardino County. Subject: Intravenous medication by nurses.

"Resolved, That this House of Delegates go on record in promoting legalization of the above procedure by nursing personnel, under medical supervision, and introduce instruction in intravenous technique amongst practicing nurses and into schools of nursing."

Your committee has been informed that the Council has appointed a committee to work with representatives of the California Hospital Association and the California Nursing Association to work out agreed-on procedures with regard to this problem and therefore moves to refer this resolution to the appropriate committee.

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: The adoption of this portion of the report is recommended. Do you know which the appropriate committee would be?

DR. ROSENOW: This one that has just been appointed.

VICE-SPEAKER BAILEY: Well, Dr. Charnock and I were looking through this situation and it materializes that he is the chairman of the committee. That is what you had in mind?

DR. ROSENOW: Yes, if that is the appropriate committee.

VICE-SPEAKER BAILEY: That is the appropriate committee. (Laughter.) Dr. Truman.

DR. TRUMAN: Does this give the House of Delegates the opportunity to express whether they are in approval of this resolution or disapproval? In other words, referring it to the committee, would that express our approval?

VICE-SPEAKER BAILEY: No, it is moved to refer to the committee.

DR. TRUMAN: Well, I think the resolution demands an expression of the committee as to our approval of this.

VICE-SPEAKER BAILEY: Would you like to amend?

DR. TRUMAN: Mr. Chairman, I would like to move that the House of Delegates approve the tentative resolution and refer it to the proper committee for action.

VICE-SPEAKER BAILEY: That will be amended first if the House approves it and refers it to the proper committee for action, is that correct, Dr. Truman? Any second to that?

... The motion was variously seconded. ...

VICE-SPEAKER BAILEY: It has been moved and seconded. Any further discussion? All those in favor of the amendment will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: The "ayes" have it and the amendment is carried.

We now go back to the basic resolution and any further debate on the original resolution as amended. All those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Carried. Dr. Rosenow.

DR. ROSENOW: Your committee assumes that the appropriate committee would act and I am sorry that that was left out of the resolution.

Resolution No. 7, introduced by Burt Davis, Santa Clara County. Subject: The Crippled Children's Program.

"Resolved, That the House of Delegates of the California Medical Association instructs the Council of the California Medical Association and the appropriate committees of the Association to direct their activities toward the following:

"1. The Legislature of the State of California be encouraged to make a realistic legal definition of a physically handicapped child.

"2. That the Legislature be requested to establish methods for uniform practices of social servicing for determining financial responsibility under the act, and, be it further

"Resolved, That the following recommendations be endorsed:

"1. That the family physician be allowed to do those procedures for which he is qualified.

"2. That the services of the family physician be fully utilized in making referrals and in following up the cases under treatment.

"3. That the family physician be furnished with consultation and progress reports, in order that he may be fully aware of cases under treatment which would normally constitute a portion of his practice. And be it further

"Resolved, That the California Medical Association undertake a program of disseminating to its members information regarding the Crippled Children's Services in order to eliminate many of the misunderstandings which have hitherto arisen regarding the operation of this program."

The importance of patients being cared for as much as possible by the physicians of their choice cannot be overemphasized. At present a group of our Council members, namely the Public Health Committee, has been appointed to the Advisory Committee of the Crippled Children's Program and major decisions of the Crippled Children's Program stem from this committee. Until our members on this committee feel legislation is necessary, your Reference Committee feels that pressing for legislation now would be untimely and recommends that this resolution be referred to the Public Health Committee.

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: Is there any discussion on this?

DR. DAVIS: Mr. Speaker.

VICE-SPEAKER BAILEY: Dr. Davis.

DR. DAVIS: I hesitate to take up your time on this again but I think there are several points that should be brought out. In the first place we go over these three resolves, the first one instructs the Council to direct its activities toward the following. It does not say that the Council shall immediately see to it that the Legislature make certain changes. It merely instructs them to direct activities toward things that I believe most of us want. One is to have a realistic definition of a crippled child. Two is that there be uniform methods of social servicing.

Now this committee on the Crippled Children's Program, the Advisory Committee to which the Public Health Committee of the Council has been appointed happens to be a committee of approximately twenty-four members. I was recently appointed to it and I attended the first meeting to which I was en-

titled to the day before yesterday. There are only five members, I think, of the C.M.A. or a relatively small group who represent actually the C.M.A. and the Academy of General Practice and other phases of our interest on this committee.

So the statement that major decisions of the Crippled Children's Program stem from this committee which infers that it stems from the Public Health Committee of the Council, I think that that is not quite borne out by the facts.

The Legislature of the State of California a year and a half ago published an interim report of the Assembly on this subject and this matter that a definition of a physically handicapped child was a matter of uniform social service were both pointed out by the Legislature and they requested that something be done about it. I am merely asking that the Council continue to work on the problems, that the matter be kept before the Council and not put off into a subcommittee of the Council, that it be kept before all of us so that some action may ultimately come from it.

Now the second resolve is endorsing certain principles, that the family physician be allowed to do that which he is qualified to do, that he work with the specialist to whom the case is referred, and that he be furnished with consultation and progress reports. None of those things, I think are objected to by any great number of our members. I think that I am not—I know I am not divulging any secret because the committee meeting day before yesterday was open, but one of the matters on the agenda which was seriously considered—no action was taken at this time but it was seriously considered and by two members of the Public Health Subcommittee, it was vigorously pressed, and that was that those people who held Board Specialty Certificates in osteopathic medicine be allowed to take care of these children.

Now I am sure that if that should come to an ultimate fruition that there certainly would be a very great degree of distress and a very great degree of dissatisfaction from the general practitioners among our own group who have been family physicians for many years, taking care of these children.

The third is one that I think the Board of Health would like to have us do. The third one says that this California Medical Association undertake a program to disseminate information to its members so that there will be less misunderstanding, and Lord knows, we all like to have that.

I therefore, Mr. Speaker, should like to amend the report for the insertion of the original resolution in order that it may be carried forth as it has been suggested in itself and these matters be brought before the Council of the C.M.A.

VICE-SPEAKER BAILEY: Dr. Davis, before you leave would you consider eliminating the last paragraph on the present report? Would you care to look at it? In other words, would that do the same sort of thing?

DR. DAVIS: In other words, that brings it back to the original?

VICE-SPEAKER BAILEY: It is your amendment then that we eliminate the last paragraph on the present report. Does anybody wish to second that?

A DELEGATE: Let's hear that read, please.

VICE-SPEAKER BAILEY: The resolve then is to this effect:

"That the California Medical Association undertake a program of disseminating to its members information regarding the Crippled Children's Services in order to eliminate many of the misunderstandings which have hitherto arisen regarding operation of this program."

DR. DAVIS: The three resolutions—the three resolves—

VICE-SPEAKER BAILEY: Well, you better tell us exactly what you want. We could take off that last paragraph which we are going to delete, and I should have spoken of the other:

"The importance of patients being cared for as much as possible by the physicians of their choice cannot be overemphasized. At present a group of our Council members, namely the Public Health Committee, has been appointed to the Advisory Committee of the Crippled's Children's Program and major decisions of the Crippled Children's Program stem from this committee. Until our members on this committee feel legislation is necessary your Reference Committee feels that pressing for legislation now would be untimely and recommends that this resolution be referred to the Public Health Committee."

And that, Dr. Davis, is the paragraph which your amendment proposes to be deleted?

DR. DAVIS: That is correct. Thank you.

VICE-SPEAKER BAILEY: Is there a second to this amendment?

... The motion was variously seconded. ...

VICE-SPEAKER BAILEY: Now all those in favor of deleting that paragraph which will therefore leave the report as it was, as Dr. Davis wrote it, and will make it mandatory that the Council consider this rather than that it be referred to the Public Health Committee.

DR. CAREY (Butte County): As a member of the Public Health Committee that has been meeting with the Crippled Children's Program for the last two years, I came to that committee as a member, a general practitioner, and as one of the most bitter opponents of the ridiculous situation that existed at that time, namely the matter of referral for our crippled children to board specialists and not being cared for by general men. Unfortunately I have had to sit down at the table with a Dr. Hayes and her staff and the rest of the Advisory Committees during that time and I have gradually been forced around to the situation where I am entirely—in almost entire agreement with the program as it is being produced today.

This is not to say that I am entirely satisfied with the program. I am very unsatisfied with it, but I was delegated as a committee of one to define a crippled

child. I think there were some 22 or 23 drafts presented to Dr. Halverson and myself and we have still not truly defined a crippled child, that is actually for the needs of this particular wording.

So much for the first statement of defining a crippled child. I would like Dr. Burt Davis to define a crippled child. Now the other part that I am wondering about here is that the Legislature be requested to establish methods for uniform practices of social servicing for determining financial responsibility under the Act. In this, if we are going back to the Legislature. If we are going to establish laws through our Legislature that will govern the handicapped and crippled children throughout the State of California, we are tackling a pretty big job. We are opening up the whole question of the Crippled Children's Program to the Legislature, every change which must be made in each and every part of the program. On the other hand, there is today a definite constructive move from your Board, from your Advisory Committee to the Crippled Children's Program, which is now being implemented to transfer the emphasis or to transfer the administration of the Crippled Children's Act from the state level to the local level.

At the meeting last Thursday it was said over and over again that we are after—we want to place in the county's hands the matter of taking care of the local Crippled Children's Program. I cannot quote to you direct figures but many of our large counties in the state of 50,000 population or more are not handling Crippled Children's Programs on their own. They are urged to do so. Your Council was told at this last meeting that the Crippled Children's Program wants to implement this particular recommendation from the Crippled Children's Program. If this is brought down to the local level your own social service program will be able to take care of the situation at that time.

Besides that the Crippled Children's Program this year has appropriated additional funds which will almost entirely take care of the additional administrative expense of handling and administering the Crippled Children's Program at the local level. If you could get these cases down at a local level I maintain—I think then you could do a much better job of social servicing. I think you could do a much better job of referral. I think you could do a much better job of handling the particular program.

As a matter of social servicing I offered the case that happened, just came to my attention three weeks ago from the Superintendent of Schools of our particular area who is having his child's teeth straightened at the expense of the Crippled Children's Program. I am not particularly happy about that but I don't know what I am going to do about it through the Legislature. I do think that we can do a great deal about it if I could ever catch him over at the Welfare Office for a few minutes, and I think the same thing applies to the rest of the state.

"That the services of the family physician be fully utilized in making referrals and in following up the cases under treatment."

Again that is a matter of activity.

"That the family physician be furnished with consultation and progress reports . . ."

That is a matter that came up almost a year ago at our last meeting on this, that they need to be implemented, and at least we are urging it. To those of you who are on the Council, Public Health members from the Council who are serving on that, when I think all of us can say that we are very much in agreement with the program that is being implemented, and as we are attempting to direct it at the present moment—now I would just not like to have this sent as a mandate with this legislative feature in it, and I think that probably the best answer to this particular program is to adopt the resolution as presented by your Reference Committee.

VICE-SPEAKER BAILEY: Thank you, Dr. Carey. Dr. Carey, then you are speaking against the amendment?

DR. CAREY: I was.

VICE-SPEAKER BAILEY: Is there anything further on the amendment?

DR. YOUNG: Mr. Speaker, Young is my name. I am from Fresno.

Members of the House: I wish to speak to the proposition as submitted by the Reference Committee.

VICE-SPEAKER BAILEY: Well, Dr. Young—

DR. YOUNG: I wish, Mr. Chairman, to speak to the amendment as submitted by Dr. Burt Davis.

VICE-SPEAKER BAILEY: Surely, either for or against?

DR. YOUNG: I am speaking in favor of the amendment as submitted by Dr. Burt Davis.

I am from Fresno County and many of the physicians of the San Joaquin Valley are very unhappy with the Crippled Children's law as it now stands, and we believe that probably the only relief that we can obtain from this law is constituting the Advisory Committee for Crippled Children Services because, actually, as it is named this is an Advisory Committee and all it can do is to advise the administrators of this law. And in order to change this law the Legislature must take action, and certainly the Legislature will listen to the Advisory Committee, I believe, if the Advisory Committee is properly advised by this House.

At the present time the definition of a crippled child in this law is very, very lax and there is nothing in the resolution as presented by Dr. Davis which attempts to specify what a crippled child is. His resolution has specifically left it to the appropriate committee of this Association and of the committees of the Legislature. The present law as it now stands has absolutely no limitations placed upon the specifics of these services except as to residence.

There is nothing said in the law which states there shall be any financial responsibility on the part of the children or the family of these children who are treated by this law. They are, however, in all fairness according to the meeting of the day before

yesterday, attempting to set up rules and standards of financial responsibility but, mind you, nothing is said in the law about those whose financial responsibility—so that it appears to us or to many of us in the San Joaquin Valley that in order to get relief on some of these issues the Legislature itself must take action and we must not leave this to an Advisory Committee of the Crippled Children's Services.

Nothing is said in the law pertaining to a panel of physicians but actually in practice there is a panel of physicians set up by this law. The law states that over and above the license that is granted to us by the State of California and over and above the degree of Doctor of Medicine granted to us by the medical schools of this nation that certain other qualifications must be met.

It is the opinion of many of us they are rather arbitrary and that we feel that the best interests of the children of this state are not being served by setting up a restriction upon them as to who shall treat them in their illnesses. We are of the opinion that if this law can be liberalized, the best interests of the children of this state will be served and that is the purpose for our recommendations to you.

We are of the opinion that this law has been abused and will continue to be abused as it now stands, and we are also of the opinion that as this law is now emphasized by various members of this profession, it is adding this community to its ranks and certainly that we cannot stand. And I set before you this proposition that if we are to devote so much of our time and energies in this House to opposing closed panels that are financed by private finances, that we are derelict in our thinking and we are derelict in our duties and to our patients in affirming the closed panel system of medicine as financed by the state. (Applause.)

And I submit to you this proposition, too; so long as we as a profession are so inconsistent as to accept this type of closed panel system as financed by the state and not fight it and reject it by those organizations that can financially pay for it, then we most justly and we most inevitably deserve the fate that will surely come to us.

I submit to you, ladies and gentlemen, that the Crippled Children's law as it is now written is not in the best interests of the children of this state; I believe it should be changed and I believe that the only place that it can be changed is through the Legislature of the State of California. It appears to me that the members of our profession who sit on that committee as advisors to the administrators of that committee can have their hands reinforced no end by an unequivocal action of this House stating that we like an open system of medicine and the law must be changed.

Thank you, Mr. Chairman.

VICE-SPEAKER BAILEY: Thank you, Dr. Young. (Applause.)

Just to keep the House perfectly clear, do you propose to speak for or against the amendment?

DR. REAVIS: I propose to speak for the amendment.

Mr. Speaker and members of the House: I am an internist who is a member of the panel which has to do with the treatment of crippled children. My special connection with this is as a cardiologist in my community and I am speaking in favor of Dr. Davis' proposition which he has now reinforced with his amendment. I feel that the method with which this thing is handled, even though I am a member of a panel, is quite unfair and I want to point out one example which has come to my attention in the treatment of these people.

I had under my care, referred to me by the Crippled Children's Program of my own county, a 24-year-old woman who has had two children, whose husband is fully employed as a baker. Thank you. (Laughter.)

VICE-SPEAKER BAILEY: Dr. Davis, the Chair gets the impression that everyone is in favor of the entire subject and it is just a matter of getting the exact implementation.

DR. DAVIS: I wish to speak in answer to some of the statements that Dr. Carey has made. It is quite true that the Board of Public Health and the Advisory Committee on Crippled Children's Services are working as hard as they can in an effort to decentralize the program and get it back to the grass roots level where everyone can see who is digging into the barrel and walking off with the swag. (Laughter.)

It is quite true that the Advisory Committee is working on a guide for the information of those people in welfare departments and health departments who have to social service this program. It is also and equally true that the definition that is laid down by law in the statutes of what constitutes a physically handicapped child is so loosely written and is so broadly interpreted that it will include almost anybody below the age of 21, and you will remember a few years ago there was a proposal in Congress that this be extended to pass recipients after they reached the age of 21 and until they got to be 45. That doesn't give them very long before they go on Social Security, so they only have a few years in which they are on their own. (Laughter.)

Now this first resolve is not compulsive. It is permissive and it places the matter frankly in the hands of the Council where it should be. Dr. Carey, and I don't wish to deprecate Dr. Carey's efforts or his committee of one in making a definition. He has invited me to make one, and at the appropriate time I can assure you that I have brought out a definition which will be introduced as a resolution under New Business. (Applause.)

VICE-SPEAKER BAILEY: We have something to look forward to. Is there further debate? This is on the amendment now.

We shall delete the last paragraph, and that is in effect putting the matter before the Council instead of referring it. All those in favor of the deletion of the last paragraph will respond by saying "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried ...

VICE-SPEAKER BAILEY: The last paragraph is here-with deleted. (Laughter.)

Now then, we will go back to the entire proposition. Those in favor of the resolution 7 as stated say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Carried. Will you continue, Dr. Rosenow?

DR. ROSENOW: I wouldn't like anyone in the House to think that we were against the intent of this resolution. We thought that we had a way of getting at it.

Mr. Speaker, I move the adoption of the committee's reports as a whole as amended.

VICE-SPEAKER BAILEY: Is there a second to that?

A DELEGATE: I second the motion.

VICE-SPEAKER BAILEY: Dr. Truman.

DR. TRUMAN: Mr. Speaker, I would like to move the reconsideration of Resolution No. 5. It appears that in our convention, according to the Legal Counsel, Mr. Hassard, we have inadvertently moved and voted that we shall go on record as promoting legislation. I am sure that none of us feels that is necessary or desirable at this time, and therefore I move we reconsider this and that in our reconsideration we amend that resolution on the bottom of page 2, delete the words "in promoting legislation" and change those "as approving" and in continuation of the second line of that resolution we introduce "of the above procedure by competently trained nursing personnel."

The resolution then would read:

"Resolved, That this House of Delegates go on record as approving of the above procedures by competently trained nursing personnel, et cetera."

Mr. Speaker, I move the reconsideration of this resolution and its amendment as I have suggested.

VICE-SPEAKER BAILEY: Dr. Truman has moved to reconsider and this is in order. The Chair has to ask you whether you voted with the affirmative, Stan. If not we will have to talk about rescinding. You did vote with the affirmative, Stan?

DR. TRUMAN: Yes.

VICE-SPEAKER BAILEY: Therefore it is in order. Any second to the move to reconsider?

A DELEGATE: I second the motion.

VICE-SPEAKER BAILEY: Now, Dr. Truman, I suppose you should restate this but I think you have pretty well done it already. Simply read this again so that we have that one resolve, the whole thing in mind.

DR. TRUMAN: I move that the resolution be amended to read:

"Resolved, That this House of Delegates go on record as approving of the above procedure by competently trained nursing personnel, et cetera."

VICE-SPEAKER BAILEY: Thank you very much, Dr. Truman. Is there a second to that?

A DELEGATE: Second the motion.

VICE-SPEAKER BAILEY: Is there any discussion? Those in favor of the motion will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: The "ayes" have it.

We have before us the main proposition of adopting the report as amended. All those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: The report is adopted.

There has been a suggestion made from the left hand side of the table that we have a ten-minute recess but Dr. Charnock has some ideas.

... The Chair was assumed by Speaker Charnock. ...

SPEAKER CHARNOCK: We have a lot of business to conduct yet, gentlemen. If you want a recess you can vote on it. I am surely hearing no clamor.

At this time we have now finished the hold-over reports from Reference Committee No. 2 and Reference Committee No. 3. We still have the report of a Special Committee, the Medical Services Committee, Dr. Leslie B. Magoon. Dr. Magoon.

REPORT OF THE MEDICAL SERVICES COMMISSION

DR. LESLIE B. MAGOON: Mr. Speaker and members of the House of Delegates:

At its Interim Session last December this House referred two resolutions to the Medical Services Committee for study and recommendation. The study is not yet complete but a progress report can be given.

The first resolution concerns the devising of a uniform claim form for health and accident insurance purposes. Preliminary investigation revealed that the commercial insurance companies were well along on an identical project of their own, and that if the medical profession were to participate in the devising of such a form, action should be prompt.

The Commission therefore appointed a subcommittee, of which Dr. William Kaiser of Berkeley has consented to be chairman, to confer with them to achieve a meeting of the minds so that any uniform claim form would meet the needs of both parties immediately concerned.

This subcommittee has not yet had time to get very far along in its work but the Commission has full confidence that its task will be prosecuted to a successful conclusion.

The second resolution concerned cost accounting studies of medical practice to determine the least as well as the more obvious cost of medical practice with the objective of relating fees to those total costs. The Commission has accepted as desirable the accumulation of such data as will review the total cost of rendering medical care, hidden as well as appar-

ent, but is as yet unconvinced that there is any necessary relationship between these costs and professional fees.

In the experience of the Commission studies such as these should first be tried out on a limited pilot scale before comprehensive statewide surveys are undertaken. On this basis a subcommittee of the Commission, chaired by Dr. Lester Lawrence of Oakland, is currently exploring the costs of such a pilot study so that they may be weighed against the possible benefit.

When this decision is made it will be referred to the Council as a recommendation of the Commission.

A further word should be said about the County Medical Society Health Insurance Study Committee. It existed only a short time. They already have demonstrated its value not only as an important mechanism for studying the big question of health insurance but as a means of educating our membership at large and as a most important method of achieving cooperative effort on the local level between the profession on one hand and the insurers and beneficiaries on the other.

The findings of these committees have duplicated those of the Commission, as a free give and take, of a round-table discussion, and have led to a much greater degree of understanding. The Commission urges again that no effort be spared by either the California Medical Association or the component societies referring to the activities of these county study committees.

Changing times, changing economics, changing social thinking, and changes in medical practice itself have posed a challenge to medicine which the profession has been slow to recognize and even slower to meet. That challenge is a question, more and more often asked by more and more people: Is the traditional method of rendering medical care to the people really the best?

We define the "traditional method of rendering medical care" as the individual, free, private practice of medicine on the economic basis of the fee for service determined by the ability of the patient to pay. And we define "the best" as "furnishing the highest quality of medical care at a cost within the means of the people."

This challenge is divisible into three components, each of which can be documented to be a widely held public feeling:

1. Public dissatisfaction with the "fragmentation" of medicine into specialties, with the resulting disappearance of the public's old ideal, the family doctor.

2. Public resistance to the traditional practice of basing medical fees upon the ability of the patient to pay.

3. Public desire, which has grown in the public mind to the stature of a necessity, for a method of paying for medical care by regular, monthly installments of a fixed amount.

The position of the medical profession in the face of this challenge has not been happy. Doctors have had to admit that specialization has resulted in the "fragmentation" of which the public complains, even while insisting that the increasing complexity of medicine has made specialization not only inevitable but in the best interest of the patient. Doctors point out that the fixing of fees on the basis of ability to pay has been to the advantage of the poor patient, and has been concrete evidence of the adherence by the profession to its obligation to furnish medical care in spite of the inability of a patient to pay.

To the physician, it seems to follow that if the factor of ability to pay is fairly applied to the poorer patient, it is equally applicable to the richer. To the public demand for some method of prepayment of, or of insurance against, the costs of medical care, the profession has offered much less resistance. Doctors are quite convinced of the desirability of some such mechanism—their opposition has been limited solely to those drastic changes in the traditional method of medical practice which a good prepayment mechanism has too often seemed to require.

Growing public pressure, based on the public feeling we have described, has steadily been weakening the position the medical profession so far has taken that the traditional methods of rendering medical care are still the best. And to this pressure of public opinion has been added the potent economic force of competition from the closed-panel capitation plans of prepaid medical care. These, by exploiting the public feeling against the asserted weaknesses of the traditional methods of medical care, have become a powerful threat to the private practice of medicine.

How well the closed panel capitation plans meet the criticisms of private individual medical practice is only too clear. They avoid public dissatisfaction with fragmentation of the profession into specialties by grouping all specialties under one roof and under one control; they eliminate the fee for service altogether; and they make possible full prepayment for all medical services. So well, indeed, does the closed panel capitation system appear to answer the public demand that two things have happened: A large segment of the public, and their political representatives in government, are convinced that this method of rendering medical care is the final answer, and are engaged in all sorts of activities to promote more and more facilities of this kind; and a growing segment of the public is deserting the individual private practitioner to become beneficiary members of such plans.

So long as the pressure for change in medicine was limited to that of public opinion (particularly since the threat of governmental intrusion had waned), the profession regarded the problem on the plane of theory, and was slow to transfer theory into practice. But when closed panel capitation plans developed as an alternate kind of medical care, it became obvious that the time for academic discussion was past and that those practical steps necessary to make

it possible for private medicine successfully to compete with these plans had first to be plotted and next to be taken. The whole purpose of this report is to name those steps.

It is almost superfluous to say that California physicians have exhibited a great degree of concern and no small degree of irritation at this development of a competing kind of medical service. The concern stems, of course, from the fact that as more and more patients turn to closed panel capitation plans, the physicians' own practices suffer and their own personal futures as individual private practitioners will seriously be endangered.

But their concern is based, too, on the belief that the quality of medical care available to subscribers of such plans has a tendency to deteriorate through the years. Thus the fine quality of medical care and the high standards of medical practice which the medical profession has so zealously guarded may seriously be compromised by continued growth of this type of organization.

The irritation of the profession has been less rational. It has taken the principal form of assault and criticism directed against a single closed-panel capitation plan which, to the physician, has epitomized and personified all the defects he believes to be inherent in this type of organization.

We call that irritation and its results poorly justified because they are based upon the obviously untenable premise that if this one plan could be eliminated, competition from this type of plan likewise would end. Nothing could be further from the truth. A great many people have been convinced that closed panel capitation plans are good, and good for them.

If such a plan were not available from its present source, some other similar plan would very soon fill the gap—no strong demand of the American people for any given product is long unsatisfied. And, in the meantime, should this one plan have been forced out of existence by any act of organized medicine, its beneficiaries and supporters would bitterly resent this effort by "the entrenched reactionaries associated with the American Medical Association" to hamper their participation therein.

The medical profession should oppose experimental plans only where it can be demonstrated that such plans are truly harmful to sick people. Many people seem sincerely to want the kind of medical service offered by the closed panel capitation plans, and it is difficult for the medical profession to deny that there is a place in our social and economic environment for plans of this kind. To proceed upon the assumption that only the medical profession knows what is good for people and should therefore attempt to legislate or by any other means dictate what kind of medical care plan should be made available to people is to be naive.

The only apparent good answer by the individual practitioner of medicine to this different kind of medical practice is the competitive, free-enterprise one of offering a better product. And the base upon which this better product must be built must be the

ethical consideration that "the welfare of the patient is the first concern of medicine."

The blueprint for our product has long been in our hands, but we have hesitated to translate it into the structure we must build. That blueprint is the "personal physician" concept as it was developed by Dichter and by Waterson in his "projection" of Dichter's report. The personal physician concept can be a full answer to public irritation with fragmentation of the medical profession into specialties. Inherent in it is the virtue of high quality, personalized, sympathetic care of the whole person, and it is the one kind of medical care that a closed panel, by the very reason of its being a panel, cannot give.

The services of a personal physician are the one thing that the private, individual physician has to sell which no purveyor of medical care under any other system of medical practice can offer. If the virtues of this kind of medical care be not enough to make people want it, then doctors must change gracefully to conform to the trend of our time and the needs and desires of the people we serve. If, on the contrary, this is the kind of medical care that people want, the medical profession must vigorously promote, and even further enhance the quality, of medical care rendered by the personal physician.

This, then, is our product—personalized, high quality medical care that only the individual, private practitioner of medicine can render. How, and on what financial terms, shall we sell it?

To borrow commercial phrases, experience has demonstrated that our product will not sell for cash in competition with the closed panel product which can be bought on time. Even high quality cannot be sold if its cost be beyond the consumer's financial ability to pay. To argue that the total cost of high quality medical care is no more than the nation's tobacco bill is to beg the question—total costs mean nothing to the individual whose individual costs are beyond his reach.

The analogy suggests our solution: The total costs of medical care must be spread so that individual cost is a pro rata of the whole, and might therefore be comparable to the individual tobacco bill. The conclusion has to be that, to sell our high-quality product, its costs must be met by some method of group payment for individual expenses—a mechanism for which the misnomer "prepayment" is a commonly accepted name.

Why has it been so difficult to devise a satisfactory prepayment mechanism applicable to individual, private medical practice? The answer is simple—the unpredictability of the costs of medical care rendered under this system of medical service. The very essence of private practice has been the fixing of fees upon the basis of the ability of the patient to pay.

But this variability, with its consequent wide fluctuations in medical charges for what appear to be identical services, has either of two results. It makes determination of a premium for insurance against full costs impossible, or, if a realistic premium is to be fixed, makes it necessary to provide a schedule

of benefits which may have no relation at all to the costs they are intended to defray.

There is one way to resolve this problem: Arbitrary fixing of uniform fees for all physicians by edict, as is done by the California Physicians' Service plan, and as would be done under any form of state medicine. There is, however, a better way short of such drastic fee regulation from above. That way was pointed out by the Study Committee report, and has been redescribed and clarified by the Medical Services Commission in its report upon the report.

Briefly stated, these reports recommend that pre-determinability of medical costs can best be attained without loss of any important degree of freedom by the individual physician by substituting for the ability-to-pay concept the principle that each physician develop his own list of charges which are uniform within his practice.

This principle is well outlined by Mr. Waterson in "Doctor and Patient" as follows: "The doctor's fees should not be increased above his estimation of the actual value of his services but should be confined to each doctor's own self-determined constant fee schedule. Deviations should only be downward—for inability to pay the normal fee—unless it is previously expressly understood that the patient demands, can afford, and expresses his willingness to pay for, more time and attention from the doctor than adequate care would normally require."

By adding to this concept its belief that there is a definite trend for physicians in any given community to set their individual fees within a relatively narrow range of variability, the Study Committee proposed that the mode (the value that occurs most frequently) of this narrow range could be considered the "usual fee" in that community. This "usual fee" then could be the basis upon which adequate coverage by indemnity insurance could be possible. The combination of individual fee schedules, the community usual-fee list and adequate indemnity insurance the Study Committee called the "Average-Fee Plan," and the Medical Services Commission has presented under the general title "The Usual Fee Indemnity Plan."

The Medical Services Commission is convinced that this is a useful and promising approach which, if properly understood and supported, would go far toward enlisting more vigorous support of medical care insurance by the medical profession, as well as satisfying the public demand for certainty and adequacy of coverage.

It is important to remember that indemnity plans furnish money to pay for medical care, but service plans furnish medical care. No service plan, and that must include C.P.S., can function without some degree of control of both patient and physician—it must to some degree be master of both. With no built-in incentive for either patient or physician to limit costs, and with the need for a statewide, uniform, fixed fee schedule whose level is determined solely by the income of the plan, the need for artificial control of both beneficiary and doctor is undeniable.

Indemnity plans, however, make the insurance agency the tool of the patient but not the master of the doctor, and allow each doctor to retain control over his own fees. The only kind of prepayment mechanism applicable to the individual, free, private practice of medicine is indemnity insurance. It should be superfluous, then, to belabor the point that the medical profession must take whatever steps are necessary to make indemnity insurance a good and adequate method prepayment. The Medical Services Commission is certain that the shortest, most conservative step in that direction is full implementation of the Usual Fee Indemnity Plan.

The Medical Services Commission therefore recommends, as the long-range program of the medical profession as it is represented by the California Medical Association, the following:

1. Vigorous prosecution of the "personal physician" concept as the basis of the kind of organization of medical practice which will result in the highest quality of medical care for the patient.

2. Implementation as rapidly as possible of the Usual Fee Indemnity Plan as being a good solution of the problem of the application of prepayment to the individual, free practice of medicine.

The Commission, in cooperation with Mr. Rollen Waterson, has prepared and presented to the Council the exact specific steps and activities which it believes should be followed to accomplish these objectives. They are at once too detailed and too obvious to require inclusion in this report to the House. No further authority for the implementation should be necessary if this broad outline of policy is adopted.

There still remains a problem—one of time. The success of the Usual Fee Indemnity Plan will depend upon education to obtain voluntary cooperation based upon the conviction of each individual physician that his acceptance of the principle of individual uniformity of fees is necessary to the preservation of private, individual medicine.

That education will take time and will be effective only in the not-near-enough future. A comprehensive prepayment plan for immediate application, even upon the admitted basis of a temporary stop-gap, is demanded by many of our component societies to meet the threat or actuality of closed panel competition.

The only such immediately available plan which permits free choice of physician in a framework of private, individual practice is an extension of California Physicians' Service's present service plan. In spite of the Commission's opposition to service plans in principle, we cannot feel justified at this time in opposing the use of an extended C.P.S. service plan by those county medical societies who feel that they need it as an immediate answer to their problems.

There can be little doubt that C.P.S. with its present income ceiling fails to be an adequate answer. With its present program, C.P.S. falls short of providing comprehensive coverage for anyone, and fails by a wide margin to provide adequate, certain coverage for those families whose incomes are above the

existing ceiling. Raising this ceiling may make of C.P.S. a more immediately useful weapon in the competitive battle with the closed-panel plans. After consultation with the C.P.S. administration, it is suggested by the Commission that to gain this end, a family income ceiling of \$6,000 should be set.

The Commission, however, is unwilling to recommend that this increase be uniformly applied statewide. There are many counties in which the threat of panel competition does not exist, and in which time to implement the Usual Fee Indemnity Plan still remains. Many counties will be resistant to an increase in C.P.S. income ceiling on the basis of their opposition to the service principle for any but low paid persons, which we have already said the Commission shares. The resistance of these counties might well prove to be sufficiently great to hamper C.P.S. operations and therefore in the long run to be to the disadvantage of C.P.S. as well as to discredit this entire approach by the California Medical Association.

On the other hand, an increase of the income ceiling on a strict local option basis is admittedly impractical because of two conditions: The frequent need to negotiate coverage from groups with members in several communities throughout the state, and because many covered individuals work in one county and live in another.

A workable solution to this dilemma has been devised and proposed by Mr. Waterson. He suggests that an increase in the income ceiling in any county be made only upon request by formal vote of a county medical society. C.P.S. will then sell the contract with the higher ceiling only in that county, but C.P.S. physician-members in other counties will accept the obligation of caring for holders of these higher-income ceiling contracts on the same terms as will those of the county wherein they were sold.

The same theory would be applied in contracts for statewide coverages—the county wherein the largest number of beneficiary members were employed would make the decision whether or not to request the higher income ceiling and that decision would be honored by physician members in all other counties in the state.

The Medical Services Commission therefore proposes the following revisions in C.P.S. operation, to be recommended by this House to the Board of Trustees of C.P.S.

1. The present C.P.S. \$4,200 income-ceiling contracts shall continue undisturbed.

2. A separate and distinct contract with a \$6,000 ceiling, sold at a higher dues cost and paying a higher fee schedule, shall be made available for sale in those counties which, by vote of the county society, request this program.

3. It shall be made a condition of physician-membership in C.P.S. that physician members, wherever located, shall honor the terms of the higher income ceiling contract in rendering medical care to any holder thereof.

The Commission is fully aware of the possible confusion and difficulties that may be entailed in the operation of a double program by C.P.S. But experience in other states with a double, or even a triple, income ceiling, and consultation with C.P.S. administration, make it seem that these may not be too great. The Commission believes that this program is worth a trial, and we are certain that decision on matters of this gravity should, to as great a degree as is possible, be made on a local-option basis.

By these recommendations, the Medical Services Commission has outlined a short-term program to fill an apparent immediate need, and a long-term program which comes as close as seems possible to us successfully to meet the challenge of "changing times, changing economics, changing social thinking, and changes in medical practice itself." I am sure that we have gone further than some of you approve, and not as far as others of you would like.

Perhaps that fact will persuade you that there may be merit in our proposals as being the mean between the extremes of "do nothing" and "do everything." We advocate neither, but we do advocate that we "do something"—so long as the result of that "something" is even higher quality, personal medical care whose costs are met by a prepayment plan which neither distorts or dominates the private, individual practice of medicine, in the basic virtues of which we still believe. (Applause.)

SPEAKER CHARNOCK: Thank you very much, Dr. Magoon. That report will be referred to Reference Committee No. 1.

Are there any other special committees or standing committees which wish to make supplemental reports at this time? The Chair hearing none, will ask that the Secretary advise if there is any old or unfinished business. If there is no old or unfinished business, according to the by-laws of this Association the Council may elect to recommend to the House of Delegates that an Interim Session be held. They have not so recommended and for that reason resolutions and other new business introduced at this session must be acted upon during the current Annual Session. We will now accept the introduction of resolutions.

... The Chair was assumed by Vice-Speaker Bailey. ...

VICE-SPEAKER BAILEY: Dr. Shipman, do you have resolutions?

DR. SHIPMAN: Mr. Speaker, a few minutes ago the Speaker, Dr. Charnock, ignoring the fact that our program for these sessions begins correctly with the House of Delegates agenda used the term "Agendum." The Council has attempted to correct that, and to correct Dr. Louie Alesen, from whom I suppose he got this error, on a number of occasions. It is a matter of regret to have to point out that he made that error today. I suppose the only explanation is that he comes from south of the Tehachapis. (Laughter.)

The Council would like to introduce the following resolutions:

RESOLUTION No. 1

WHEREAS, Dr. William Henry Geistweit, Jr., has been a member of this Association for thirty-three years and has served well and faithfully as secretary of the San Diego County Medical Society for twenty-eight years; and

WHEREAS, This service qualifies him for such honors as the Association may bestow upon him; and

WHEREAS, Dr. Geistweit has retired as secretary of the San Diego County Medical Society and has limited his medical practice; now, therefore, be it

Resolved, That the House of Delegates confer upon Dr. Geistweit Honorary Membership in the California Medical Association, effective January 1, 1955.

VICE-SPEAKER BAILEY: This will go to Reference Committee No. 3.

DR. SHIPMAN: The next resolution is:

RESOLUTION No. 2

WHEREAS, The California Medical Association has been a pioneer and leader in the development of voluntary health insurance; and

WHEREAS, Purchasers of health insurance now need to have greater certainty of the adequacy of their coverage for the costs of doctors' services; and

WHEREAS, This greater certainty of coverage cannot be achieved without further positive action on the part of the medical profession; now, therefore, be it

Resolved, That the California Medical Association pledges every contribution it can make and in the public interest should make, to the fulfillment of this public need.

VICE-SPEAKER BAILEY: That goes also to Reference Committee No. 3.

DR. SHIPMAN: And the next three are the resolutions described by Dr. Magoon in the order in which they were passed by the Council. The first:

RESOLUTION No. 3

Resolved, That the California Medical Association proceed with vigor in the study, development and implementation of the Usual Fee Indemnity Plan.

VICE-SPEAKER BAILEY: Thank you. The same committee.

DR. SHIPMAN: And next:

RESOLUTION No. 4

WHEREAS, Many people are anxious to know in advance what their attending doctors' fees will be in order that they may secure adequate insurance or other means to pay those fees without worry about the financial problem at the time they need medical care; and

WHEREAS, Nearly all doctors already have fees which are their customary charges for the particular service involved; now, therefore, be it

Resolved, That the California Medical Association urge each of its members (a) To set up a list of his own fees, (b) to make this list known to his own patients, and (c) to assure his patients that he will make no higher charges except by agreement with the patient concerned before service is given.

VICE-SPEAKER BAILEY: That also goes to Reference Committee No. 3.

DR. SHIPMAN: And the third:

RESOLUTION No. 5

WHEREAS, Many physicians in the state of California, and many component medical societies have felt a desire to provide service benefits with greater certainty of coverage for subscriber groups within their own areas; and

WHEREAS, They have suggested that this should be done by the raising of the "income ceiling" in C.P.S. operations; and

WHEREAS, This House of Delegates has already gone on record as recommending experimentation in this field on the county society level with a view to ultimate development of improved forms of medical care insurance based on demonstrated experience and results; therefore, be it

Resolved, That this House of Delegates recommend:

1. That the California Physicians' Service develop a form of service coverage based on a \$6,000 income ceiling, with appropriate increases in the dues structure and in the schedule of fees to be paid, and in the formulation of a uniform schedule of fees;

2. That each county society be authorized to request that this form of C.P.S. coverage be offered within its own area, in addition to the present contracts;

3. That physician members of C.P.S. in a county which has not requested the higher ceiling, abide by the income ceiling (in providing full services without additional charge) for beneficiaries who have secured this coverage in some other county medical society area.

VICE-SPEAKER BAILEY: This goes to the C.P.S. Reference Committee.

DR. SHIPMAN: And the final resolution:

RESOLUTION No. 6

WHEREAS, The Medical Services Commission is making a continuing study of the economics of medical practice, and acts as an advisory committee to the Council of the California Medical Association; and

WHEREAS, The recommendations made to the Council of the California Medical Association by the Medical Services Commission are of vital importance to both rural and urban members of the California Medical Association, whether general practitioner or specialist; now, therefore, be it

Resolved, That the number of members of the Medical Services Commission be increased from nine to twelve.

VICE-SPEAKER BAILEY: This also goes to Reference Committee No. 3.

Dr. Ludwig—may I recognize—The Chair will recognize you next. Are there any announcements at this time?

... Announcements. ...

VICE-SPEAKER BAILEY: Now, Dr. Ludwig.

DR. LUDWIG: Mr. Speaker, I have two resolutions. The first is on foreign trained physicians for licensure:

RESOLUTION No. 7

WHEREAS, Each state in this country has its own licensing board with its individual licensing privileges there is no common denominator that will give a true comparative evaluation of the basic science background and professional competence of foreign trained physicians for licensure; and

WHEREAS, The Councils of Medical Education and Hospitals of the A.M.A. and the Association of American Medical Colleges list as acceptable for approval but a few of the over 500 foreign medical schools of the world and find that a conscientious evaluation of medical schools on a world-wide basis presents difficulties that are practically insurmountable; and

WHEREAS, A uniform procedure for screening the basic knowledge and professional competence of foreign trained physicians individually, completely dissociated from licensing privileges, will render a far greater service to the state medical licensing boards than the combined efforts of the Councils can render through attempts to evaluate foreign medical schools; and

WHEREAS, The National Board of Medical Examiners being set up to conduct high quality examinations in keeping with the current advances of medicine present a highly effective and uniform screening device; therefore, be it

Resolved, That the California Medical Association recommend to the Board of Medical Examiners of the Department of Professional and Vocational Standards that a mutually satisfactory method of procedure be developed with the National Board of Medical Examiners for the purpose of screening all foreign trained physicians; and be it further

Resolved, That the California Medical Association recommend to the Board of Medical Examiners that foreign trained physicians present evidence of having satisfactorily completed the National Board examinations as a prerequisite to consideration for licensure.

VICE-SPEAKER BAILEY: Thank you, Dr. Ludwig. That goes to Reference Committee No. 3.

DR. LUDWIG: The subject of this resolution is foreign trained physicians and quality of medical care:

RESOLUTION No. 8

WHEREAS, It is the present policy of the United States Government to admit into this country sev-

eral hundred thousands of displaced persons from all over the world and from many areas that have not had an immigration quota and included are a large number of foreign trained physicians about whose ability little is known; and

WHEREAS, Most foreign medical schools have not provided and currently cannot provide the pattern of medical education that is regarded everywhere in this country as minimal and foreign graduates in most instances have had no real training in the basic sciences or the clinical instruction so necessary in our concept of the proper training of the physician; and

WHEREAS, If large numbers of these foreign trained physicians without proper basic professional education enter into the practice of medicine in the United States it inevitably will lower the level of medical practice in this country for the next several decades; and

WHEREAS, The United States, for its own welfare must maintain the highest quality of medical practice in all its phases in order to provide the American people with what they now have, medical care not excelled anywhere in the world; therefore, be it

Resolved, That the California Medical Association instruct its Delegates to the American Medical Association to introduce and press for adoption a resolution directing the Council on Medical Education and Hospitals of the A.M.A. to withhold approval of any institution that accepts for intern or resident training foreign trained physicians who are ineligible for licensure in the United States, except those bona fide foreign graduates selected for training in this country and who return at the termination of said training.

VICE-SPEAKER BAILEY: Thank you, Dr. Ludwig. That will be referred to Reference Committee No. 3.

Dr. Sherman of San Francisco.

DR. SHERMAN: Mr. Speaker, these four following resolutions originated in and have the complete approval of the San Francisco Medical Society delegation to the C.M.A. The first resolution:

RESOLUTION No. 9

WHEREAS, The California Physicians' Service has now established two different methods for prepaid care of the sick, namely, service type plan and an indemnification plan; and

WHEREAS, These two types differ in structure, organization, required reserve and are under different jurisdiction, namely (1) service type—attorney general, and (2) indemnity type—insurance commissioner; and

WHEREAS, Under the above conditions, the financial structure must of necessity be separate and distinct; therefore, be it

Resolved, That the financial contribution of the service plan to the indemnity plan be limited to the very minimum necessary to assure performance of contracts entered into; and

Second, That the directors of the indemnity corporation conduct its business in a conservative manner.

VICE-SPEAKER BAILEY: That will go to Reference Committee No. 3.

DR. SHERMAN:

RESOLUTION No. 10

WHEREAS, The California Physicians' Service is now well established, financially sound and able to meet its obligations; therefore, be it

Resolved, That the California Physicians' Service Trustees carry only the average reserve recommended by the National Association of Insurance Commissioners in order that the full amount of an adequate fee schedule can be paid.

VICE-SPEAKER BAILEY: That will go to the C.P.S. Reference Committee.

DR. SHERMAN:

RESOLUTION No. 11

WHEREAS, There has been a continuing and recurring pressure to raise the income ceiling in California Physicians' Service since its inception;

WHEREAS, The fee schedule has not been raised in proportion;

WHEREAS, The recent proposal to raise the income ceiling to \$6,000 gross family income will encompass a large majority of those eligible for voluntary health insurance; therefore, be it

Resolved, That when so large a proportion of the population may be covered, the fee schedule should be reasonable, which means in fact the prevailing private fees; until the California Medical Association has developed an acceptable schedule for the state, such interim fee schedules should be those developed by the county medical associations in which they apply and when it is locally desired and should include a provision for major medical illnesses as well as surgical conditions; review and revision of all schedules in force should be yearly; and be it further

Resolved, That it be established as a principle that whenever the income ceiling is raised that there be a concomitant and equitable adjustment of the fee schedule.

VICE-SPEAKER BAILEY: We will refer that to the C.P.S. Reference Committee.

DR. SHERMAN: The last is very short.

RESOLUTION No. 12

Resolved, That if the \$6,000 gross family annual income ceiling is adopted by the California Medical Association House of Delegates with its accompanying increased fee schedule, California Physicians' Service may be permitted to write policies for lower income ceilings provided that there be concomitant and equitable increases in the California Physicians' Service fee schedule for these groups.

VICE-SPEAKER BAILEY: Again this goes to the C.P.S. Reference Committee.

DR. GARNETT CHENEY (San Francisco): This is Garnett Cheney of San Francisco. I have only one resolution to introduce:

RESOLUTION No. 13

WHEREAS, Those physicians restricting their practices to nonsurgical illnesses have for many years taken part in prepay sickness insurance programs largely as a public service; and

WHEREAS, With the extension of prepay insurance plans the economic position of the nonsurgical physician is rapidly becoming untenable; and

WHEREAS, The satisfaction of all physicians, whether surgical or nonsurgical, is essential for the ultimate success of prepay sickness insurance; and

WHEREAS, Major medical illness is comparable to major surgical illness in its justification of an adequate fee; therefore, be it

Resolved, That the following principles be accepted:

1. Each physician rendering service as a C.P.S. professional member shall be requested to declare himself as to his field of practice, whether surgical or nonsurgical.

2. A nonsurgeon member shall be a physician who derives 5 per cent or less of his professional income from surgical procedures.

3. The present fee schedule of C.P.S. is to be elaborated to include a detailed schedule of diagnosis and treatment of major medical illnesses.

4. Physicians practicing as nonsurgeons shall be prepared to make available upon request a suitable case report to the medical director of C.P.S.

VICE-SPEAKER BAILEY: Thank you. That goes to C.P.S. Reference Committee.

Dr. Herzog.

DR. HERZOG: Dr. George K. Herzog, San Francisco.

I have but one resolution. It has been presented to the San Francisco Delegates and approved by them.

RESOLUTION No. 14

WHEREAS, Under the California adoption laws independent adoptions are permitted, under which a mother is allowed to place her child for adoption; and

WHEREAS, Physicians and attorneys representing mothers who desire to place their children for adoption have in good faith, and in reliance on their respective licenses to practice, furnished medical and legal advice and assistance; and

WHEREAS, A recent opinion issued by the Attorney General of the State of California casts doubt on the right of a mother placing a child for adoption to have legal counsel and medical advice; and

WHEREAS, It is believed to be contrary to the public interest to restrict the right of any citizen to medical aid and assistance and legal counsel; now therefore, be it

Resolved, That the House of Delegates of the California Medical Association urges the Legislature of the State of California to clarify the adoption laws by adding a section thereto specifying that the parent of a child has the right, in presenting the child for adoption, to act through her attorney or her physician, or both, and to have legal counsel and medical assistance, in this field as in all others; and be it further

Resolved, That a copy of this resolution be forwarded by the secretary of the Association to the State Bar of California, with the request that the appropriate legislative body of the State Bar approve the principles herein expressed and authorize the State Bar to join with the California Medical Association in bringing this matter to the attention of the Legislature.

VICE-SPEAKER BAILEY: Thank you, Doctor. That will go to Reference Committee No. 3.

DR. FLOOD: Randolph G. Flood, San Francisco.

Ladies and Gentlemen: I have one resolution that I would like to present.

RESOLUTION No. 15

Resolved, That if the \$6,000 gross family annual income ceiling is adopted by the C.M.A. House of Delegates with its accompanying increased fee schedule, that this income ceiling level and its fee schedule be considered the only ones in existence on the expiration of all present C.P.S. policies.

VICE-SPEAKER BAILEY: That will go to the C.P.S. Committee. Doctor.

DR. TALBOTT: Grace Talbott of San Francisco.

VICE-SPEAKER BAILEY: We are going to have somebody besides someone from San Francisco next time.

DR. TALBOTT: This is a resolution that was presented to the San Francisco County Medical Society and accepted by them unanimously.

RESOLUTION No. 16

WHEREAS, The Council on Medical Education and Hospitals of the A.M.A. appears to be developing a policy of eliminating partial residencies from accreditation in those hospitals where complete board training is not offered, as shown by the recent ruling withdrawing approval of one year pediatric residencies; and

WHEREAS, Restriction of recognition of residencies only to those institutions who can furnish a complete program of two or more years as recommended by the Council on Medical Education and Hospitals of the American Medical Association militates against the adequate training of residency staffs and the perfection of care of patients, both clinic and private, in many hospitals, with or without university affiliations; therefore, be it

Resolved, That representation should be made to the A.M.A. House of Delegates calling to their attention the opinion of the C.M.A. House of Delegates as to the deleterious effects on hospital programs of

the above action of the A.M.A. Council on Medical Education and Hospitals.

VICE-SPEAKER BAILEY: Thank you very much. It will go to Reference Committee No. 3.

Now we will have Dr. Ed Crane from Los Angeles.

DR. CRANE: This resolution represents the feeling of the Inglewood branch of the Los Angeles County Medical Association. It is somewhat a duplicate of a previous resolution that has just been presented but we felt it might add something to the previous resolution and help the committee come to a better solution.

RESOLUTION No. 17

WHEREAS, C.P.S. fee schedule has been admittedly a low fee schedule since its start;

WHEREAS, The majority of medical doctors of C.M.A. are agreed on this point;

WHEREAS, This fee schedule is widely publicized and used as index of what C.M.A. doctors consider adequate medical fees; and

WHEREAS, This schedule is being used as a yardstick by commercial insurance companies;

WHEREAS, This basic fee schedule has not been appreciably changed since its inception in 1939; now, therefore, be it

Resolved, That the House of Delegates instruct the directors of C.P.S. to set up a fee schedule which is 75 per cent higher than the original 1939 fee schedule; and be it further

Resolved, That the directors of C.P.S. be instructed that they may pay that per cent of this fee schedule that is consistent with a solvent operation; and be it further

Resolved, That the Directors of C.P.S. review this schedule each year for question of alteration.

VICE-SPEAKER BAILEY: Thank you, Dr. Crane. That will go to the C.P.S. Reference Committee.

Dr. Bullock.

DR. BULLOCK: Lewis T. Bullock, Los Angeles County Medical Association.

RESOLUTION No. 18

WHEREAS, Rabies is a communicable disease transmitted to man largely through the bite of dogs. It is always fatal. No useful treatment is known but a reliable means of prevention is available through the use of a safe and effective vaccine grown on eggs. This vaccine is safer, cheaper and less painful than the old Pasteur treatment for prevention after exposure. Rabies can be eliminated. Continued deaths of animals or of humans result from failure to apply available knowledge; now therefore, be it

Resolved, That this House state its support of universal vaccinations of dogs against rabies as a valuable measure for the protection of the public health and that a bill to require vaccination of all dogs in California against rabies be prepared, introduced and supported in the Legislature by the representatives of the California Medical Association.

VICE-SPEAKER BAILEY: That will go to Reference Committee No. 3.

Dr. Henry Gibbons of San Francisco.

DR. GIBBONS: Dr. Gibbons, San Francisco.

RESOLUTION No. 19

WHEREAS, The maintenance of good health care is a prime function of the medical profession, and is essential for the success of voluntary sickness service plans; and

WHEREAS, Adequate availability of service by medical and surgical specialists is an integral part of good health care; now, therefore, be it

Resolved, That this House of Delegates request the officers of C.P.S. to study and recommend means for the inclusion of specialist services in the benefits of its insurance policies.

VICE-SPEAKER BAILEY: Thank you. That will go to C.P.S. Reference Committee.

Dr. Newhall.

DR. NEWHALL: Dr. Newhall from Santa Cruz. This resolution has been approved by the Santa Cruz County Medical Society.

RESOLUTION No. 20

WHEREAS, The public is entitled to efficient and harmonious operation of a nonprofit hospital; and

WHEREAS, The primary responsibility of the hospital management is to provide facilities and the primary responsibility of the medical staff is to provide medical care; and

WHEREAS, Even though close cooperation and many overlapping functions are involved in the provision of good care to hospitalized persons, the separate underlying responsibilities provide a natural basis for a healthy balance of power; therefore, be it

Resolved, That the California Medical Association go on record in favor of the proposition that the duly constituted medical staff of a nonprofit hospital be allowed to make the final decisions regarding acceptance and rejection of its members; and be it further

Resolved, That this resolution be brought to the attention of hospital accrediting agencies for use by them as they review the organizational structure of nonprofit hospitals in the State of California.

VICE-SPEAKER BAILEY: Thank you, Doctor. That goes to Reference Committee No. 3.

Dr. Martin.

DR. MARTIN: James Martin, San Bernardino County. Mr. Speaker:

RESOLUTION No. 21

WHEREAS, The American Medical Association in holding its annual sessions finds that it is necessary for these meetings to be held at various centers in the United States; and

WHEREAS, These meetings are held every few years in California; and

WHEREAS, There are but few suitable locations for these meetings in California; and

WHEREAS, These meetings entail considerable expense by the local medical society, which usually acts as the host; and

WHEREAS, This expense is thus not fairly distributed, and financial aid from other county medical societies is usually not obtained; now, therefore, be it

Resolved, That the California Medical Association meet such expenses and thus provide a more equitable distribution of the costs.

(Applause.)

VICE-SPEAKER BAILEY: Thank you. That will go to Reference Committee No. 3.

Now may we have Dr. Davis.

DR. DAVIS: I won't hold you in suspense any longer. The title of the first resolution is "Definition of a Crippled Child." (Laughter.)

RESOLUTION No. 22

WHEREAS, There has been great dissatisfaction with the existing definition of a crippled child, as defined in the Crippled Children's Act; and

WHEREAS, This dissatisfaction has not been confined to the medical profession, but also was emphasized by the Assembly Interim Committee on Public Health in its report of January 16, 1953, regarding the Crippled Children's program in California; now, therefore, be it

Resolved, That the Council of the California Medical Association and the appropriate committees be instructed by this House of Delegates to exercise their good judgment toward efforts to amend the existing definition to make it more satisfactory; and, furthermore, be it

Resolved, That the following definition is suggested: "For the purposes of this act a physically handicapped child is any person under twenty-one years of age who has a physical defect resulting from congenital anomaly or acquired through disease, accident, or faulty development; and for which treatment is required in order to assure the child more normal mental and physical development or to arrest the extension of the handicap.

"Treatment may be afforded when there is reason to believe that such treatment may cure or arrest the condition and when financial hardship prevents adequate care through other than public means, or where adequate care can not be obtained through the usual channels. It is the purpose of the Act to provide assistance to handicapped children who may be benefited but the Act is not to be interpreted in a manner which will dissipate these funds for purposes in which:

"1. There is not reasonable assurance of physical improvement in the child.

"2. Where other funds are available to meet the cost of such care.

"3. Where the condition is of a trivial nature.

"4. Where the care may safely be postponed until such time as the child may elect to have the treatment himself."

VICE-SPEAKER BAILEY: That will go to Reference Committee No. 3. We have another one, Dr. Davis.

DR. DAVIS: This second resolution is entitled "Hospital Accreditation."

RESOLUTION No. 23

WHEREAS, Before 1953, the American Medical Association did not take an active part in the overall examination and approval of hospitals and similar institutions limiting its approval to the particular services in these institutions, which were satisfactory for intern and resident training; and

WHEREAS, Approval of the general operating facilities of a hospital including sanitation, medical staff, and administrative policy had prior to 1953 been subject to various inspections by different organizations and this led to confusion regarding the relative merits of these approvals; and

WHEREAS, On December 6, 1952, the Hospital Standardization Program of the American College of Surgeons was officially conveyed to the Joint Commission on Accreditation of Hospitals, which is composed of representatives of the American Medical Association, the American Hospital Association, the Canadian Medical Association, the American College of Physicians and the American College of Surgeons; and

WHEREAS, This group during 1953 established standards for Hospital Accreditation; and

WHEREAS, Some of these standards relating to medical staff are as follows:

1. The medical staff is responsible for the quality of medical care in the hospital and must accept and assume this responsibility, subject to the ultimate authority of the hospital governing body.

2. The medical staff must be a self-governing body.

3. Staff meetings are held for the purpose of reviewing the medical care of patients within the hospital and not for the presentation of scientific papers or discussions.

4. Staff appointments are made officially by the governing body. Recommendations are customarily made by the active staff, and in no case shall a governing body make an appointment to the staff without first requesting such a recommendation.

5. Officers shall come from the active staff and shall be elected by the active staff; now, therefore, be it

Resolved, That this House of Delegates of the California Medical Association endorses the concept that hospital accreditation is of interest to all practitioners under which the Joint Commission on Accreditation of Hospitals was formed and endorses the Standards of Hospital Accreditation as published by the Joint Commission on Accreditation, a portion of which is listed above; and be it further

Resolved, That all component county medical societies be made fully aware of this new acceptable

mechanism which is designed for furthering the public health and welfare; and be it further

Resolved, That this House of Delegates of the California Medical Association encourages the component county medical societies to advise their members that members of the societies and of this association be encouraged to assist those institutions which are not able to meet these standards in order that they may qualify for such accreditation.

VICE-SPEAKER BAILEY: Thank you, Dr. Davis. That goes to Reference Committee No. 3.

Dr. Hadley, do you have something to offer there?

DR. HADLEY: Dr. Hadley of San Bernardino. Mr. Speaker, this resolution was discussed by our local county medical society and I wish we all would remember that we are none of us actuaries but are in full accord with the principles of this resolution.

RESOLUTION No. 24

WHEREAS, California Physicians' Service was conceived and developed to provide medical and surgical care for those people in the semi-indigent or low income bracket; and

WHEREAS, These people have now achieved a higher income status, and are most desirous of being protected against the higher cost of the more serious illnesses, and who look upon fee schedules according to their top limits; and

WHEREAS, The care for ordinary and minor ailments is a part of their daily economy, that they can individually pay for; and

WHEREAS, Thus California Physicians' Service in its present form has developed into a new field for which there is no coverage; therefore, be it

Resolved, That the present system of affording medical and surgical care by California Physicians' Service shall be abolished and a new concept of such care be established in the form of a \$50 annual deductible type of insurance in which the individual family shall pay the first \$50 per year for any medical and surgical expense, and the California Physicians' Service shall pay for the remainder to the limit of five years' care or \$5,000.

VICE-SPEAKER BAILEY: Thank you, Dr. Hadley. Since you are chairman of Reference Committee No. 3 I take it you would recommend sending this to C.P.S. Reference Committee? So be it. C.P.S. Reference Committee for Dr. Hadley's resolution.

Dr. Bender.

DR. BENDER (San Francisco): Mr. Speaker, members of the House: I have three but they are not terribly long. First is:

RESOLUTION No. 25

WHEREAS, During the past three years, the American College of Surgeons has conducted in the public press a sensational campaign of accusation and condemnation of alleged widespread practice of fee-splitting, ghost surgery and unnecessary operations on the part of the medical profession; and

WHEREAS, Such criticism has been wholly destructive and unaccompanied by any effective remedy to supplement public exposure; and

WHEREAS, There exists within the representative organizations of the medical profession means to eradicate the practices so vigorously condemned; therefore, be it

Resolved, That the accompanying letter, which develops the method by which such undesirable practices can be eradicated by the medical profession, be sent to the Board of Regents of the American College of Surgeons, with copies to the governing bodies of the American College of Physicians, American Hospital Association, and the Canadian Medical Association, with the assurance of the wholehearted and active support of the California Medical Association in such a constructive effort, in the interest of the public and of the overwhelming majority of physicians whose integrity is beyond question.

Mr. Chairman, this letter is necessarily long and I respectfully suggest that it not be read at this time because it is going to be typed and members will have a chance to read it.

VICE-SPEAKER BAILEY: Thank you. Your suggestion is accepted. That will go to Reference Committee No. 3.

(The following is the letter referred to by Dr. Bender):

American College of Surgeons
40 East Erie Street
Chicago 11, Illinois
Gentlemen:

Time after time in the past three years the American College of Surgeons has broadcast to the public that fee-splitting, ghost surgery and unnecessary operations are widespread practices. There is reason for disagreement with such an indictment, but it is not the purpose of this letter to argue the validity of your charges. Rather would we implement effective means of correction. Certainly elimination of such acts is mandatory if we are to serve the best interests of the public and preserve the fair name of medicine which we hold in trust from our forebears for our successors.

These unsavory practices can be eradicated. The American College of Surgeons has taken the first steps; the College is duty-bound to take the final one, for which you have the machinery already in motion. We feel it is our duty to suggest methods by which this can be done on both national and local levels.

For many years, the American College of Surgeons has developed and maintained standards of hospital operation with a nationwide system of inspection of facilities, records and operational procedures. In order to be accredited, an institution must meet certain requirements. Most hospitals strive for such approval; to lose it would be catastrophic. In December 1952, the American College of Physicians, the American College of Surgeons, the American Hospital Association, the American

Medical Association and the Canadian Medical Association joined to strengthen the project, which is conducted now by the Joint Commission on the Accreditation of Hospitals. Thus inspection of hospitals is an established accepted procedure.

Fee-splitting, ghost surgery and unnecessary operations are surgical offenses. Practically all operations are performed in hospitals. The Joint Commission on Accreditation has the power to withdraw certification and to penalize severely any institution which condones such practices. To eradicate alleged abuses, we feel that certain of your principles should be more rigidly enforced and others added. Among these we might mention the following:

1. Definite specific rules which will outlaw such misconduct.

2. Notify accredited hospitals, and those who apply, that infraction of these rules will cancel your approval automatically. Make hospitals responsible for misdeeds of staff physicians, in fact of all professional personnel.

3. Raise the standards of hospital records, particularly the detailed description of each operation and of the microscopic examination of tissue removed.

4. Augment your inspection service with inspectors qualified to evaluate critically such records, and to report their findings factually, including their own microscopic examination of tissue in questionable cases.

5. Make expulsion the automatic punishment of any of your members found guilty of such misconduct.

6. One of your rules may have to require each physician taking part in a surgical case to send his bill separately. Disregard of this principle should subject the hospital in which the patient was cared for to cancellation of certification. Strong medicine, even autocratic, but absolutely justifiable if necessary to root out the evil we fight.

7. With the same zeal with which you condemn misconduct, publicize what you are doing to correct it, including names of hospitals which are added to or deleted from the approved list, as a measure of their cooperation in the drive for surgery of integrity.

The third step will detect the ghost surgeon. The fourth will expose the unnecessary operator. The sixth may be necessary to probe any fee splitting arrangements but we have the feeling that the stimulated cooperation of other members of the same staff will help solve this problem. A hospital faced with loss of certification will expel the causative culprit from its staff, in self protection, at least. Without the hospital to work in, where will he be able to continue his waywardness? Only in hospitals of uncertain standards and it won't take patients and other doctors long to avoid these. We physicians are opposed fundamentally to regimentation, but we must distinguish between this and self-discipline. The peri-

odic visit of a bank examiner does not disturb the bank with its affairs in good order.

Of course, such an expanded inspection and publicity program would be costly, but what price integrity? Untold effort and countless dollars are expended on public relations which go up in smoke before one of your blasts. Let's use some of these resources to eradicate the evil. What better public relations?

At the local level much can be done to supplement your effort. Most county societies have an active committee on professional relations which hears and adjudicates charges from patients or physicians of improper conduct by any of their members, and has the power to impose punishment. They would welcome the opportunity to join your crusade, given the impetus of constructive action by the Joint Commission on the Accreditation of Hospitals. We urge you to use your influence toward this end. There will be a continuing effort to stimulate both patients and physicians to expose such malfeasance.

You have stated our house needs cleaning. That is a job for us, not for our neighbors, the public we serve. We assure you of our wholehearted cooperation in carrying out any plans which you may institute. Any public condemnation of fee-splitting, ghost surgery and unnecessary operations in the future must logically devote at least equal space and emphasis to an organized campaign by the medical profession to eradicate such practices.

Yours very truly,
California Medical Association
By the President

DR. BENDER:

RESOLUTION No. 26

WHEREAS, The medical profession of California is being called on to practice under increasing numbers of health insurance plans, physician-sponsored and otherwise, with great diversity of operative provisions; and

WHEREAS, The subject is to be complicated further by the projected three-fold program of C.P.S., i.e., the existing service plan, the proposed local-option higher-ceiling program, and the authorized but not yet operative indemnification method; and

WHEREAS, No provision exists within C.M.A. solely and specifically for state-wide integration of the activities of constituent county societies relative to all such health insurance plans, since the function of the C.P.S. Board of Trustees is administrative and limited in its scope to C.P.S. projects, and the C.M.A. Council has many other unrelated responsibilities; and

WHEREAS, The competitive predominance of unregimented medicine and surgery will depend inevitably on the considered uniformity of policy and action of free doctors of medicine; therefore, be it

Resolved, That an authority be created in an existent committee, if practicable, or in a special committee composed of seven individuals, appointed by the Council and of course responsible to the Council, to serve strictly as an action committee, in contra-

distinction to study groups, for the specific purpose, to

1. Develop and implement strategy, immediate and long-range, designed to make the private individualized practice of medicine more and more attractive competitively, with at least equal emphasis on quality of medical care, which is our area of strength, as on cost;

2. Coordinate as closely as possible the activities in this field by constituent county societies, without presuming to invade the autonomy of those societies, in the interest of the economy, efficiency and effectiveness which are characteristic of uniformity of effort;

3. Integrate and intensify the publicity activities of C.M.A. and C.P.S. in health insurance matters, in order to inform the physicians of California of our task as individuals and as an organization, and about the issue; and to impress on the whole population the facts about sound medical care and its cost;

4. In short, to combine the experience of the past fifteen years, and the product of continuing studies, with ideation and planned action, to win back for the medical profession the initiative essential to perpetuation of the time-proven individualized practice of medicine.

VICE-SPEAKER BAILEY: Thank you, Dr. Bender. That will go to the C.P.S. Reference Committee.

DR. BENDER:

RESOLUTION No. 27

WHEREAS, C.M.A. and C.P.S. pay on a per diem basis for the maintenance of those serving those organizations away from their homes, that is \$25 per diem to officers, C.M.A. Councilors, Delegates and Alternates to A.M.A., and C.P.S. Trustees as compared with reimbursement for actual living expenses of committee members and employees traveling on official business; and

WHEREAS, The \$25 per diem allotment is actually greater than the maintenance allocation of comparable organizations including the great majority of other state medical associations; and

WHEREAS, The increasing need of funds for the task of strengthening the competitive position of unregimented medicine in the complicated and expanding field of prepaid medical care and for other responsibilities justifies reasonable conservation of our resources in the internal operations of C.M.A. and C.P.S.; therefore, be it

Resolved, That the \$25 per diem allotment be discontinued and replaced by reimbursement for actual cost of first class hotel accommodations of members equitably to all C.M.A. members serving in official capacity away from home; and be it further

Resolved, That the current comparable practice of paying the actual cost of the first class travel for such representatives be continued.

VICE-SPEAKER BAILEY: That goes to Reference Committee No. 2 since it has to do with finances.

DR. MILES (Monterey County): Mr. Speaker:

RESOLUTION No. 28

WHEREAS, It has become apparent that the sale to chiropractors and other unauthorized users of certain drugs and pharmaceuticals, particularly barbiturates, antibiotics and sulfonamide drugs, has become a practice with certain drug houses; and

WHEREAS, Certain chiropractors and other unauthorized persons are said to be dispensing these drugs illegally and without control in violation of existing statutes and laws; now, therefore, be it

Resolved, That the House of Delegates of the C.M.A. direct the Council of the C.M.A. to urge the California State Board of Pharmacy and other state and federal agencies concerned to investigate these violations and to more rigidly enforce these laws now existing and prohibiting such sale and use by unauthorized practitioners; and be it further

Resolved, That a copy of this be sent to the California State Board of Pharmacy.

VICE-SPEAKER BAILEY: Thank you, Dr. Miles. Are there any further resolutions?

DR. MILES: I have one.

VICE-SPEAKER BAILEY: Yes, Dr. Miles, one more.

DR. MILES: This resolution is presented with the approval of the Executive Committee and membership of the State Society of Pathologists:

RESOLUTION No. 29

WHEREAS, The Clinical Laboratory Act as now in effect recognizes three classes of lay individuals subject to licensure or certification, namely, the clinical laboratory technologists, technicians and technician trainees; and

WHEREAS, The Clinical Laboratory Act recognizes as directors of clinical pathological laboratories not only doctors of medicine but lay individuals not holding the degree of Doctor of Medicine, but known as technologists; and

WHEREAS, The Clinical Laboratory Act is at variance with actions taken by the House of Delegates of the American Medical Association and the House of Delegates of the California Medical Association which have repeatedly reaffirmed that pathology in all its branches is the practice of medicine; and

WHEREAS, The State of California, Department of Public Health, currently has under consideration a proposal to seek amendment to the Clinical Laboratory Act which would widen licensure or certification of any M.D. individuals at the technologist level, such licensure to permit biochemists, microbiologists and others to direct laboratories in which only tests within their specialized fields would be conducted; and, further

WHEREAS, This proposed extension of licensure or certification would make eligible as candidates for certification those additional individuals holding the degree of Doctor of Philosophy with two years' acceptable experience; and

WHEREAS, Any enlargement of the licensure of individuals not holding the degree of Doctor of

Medicine under the Clinical Laboratory Act to practice this duly recognized branch of medicine is not in the public interest or good as well as at variance with the principles adopted by the American Medical Association and the California Medical Association; be it therefore

Resolved, That

1. The House of Delegates of the California Medical Association direct the Council of the California Medical Association to inform the State of California Department of Public Health that it is not in favor of any proposed legislation which would further enlarge the licensing or certification criteria of the Clinical Laboratory Act.

2. That the Council of the California Medical Association take such steps as are necessary to oppose any such legislation.

3. That a copy of this resolution be forwarded to the Director, State of California, Department of Public Health.

VICE-SPEAKER BAILEY: Thank you, Dr. Miles. Are there further resolutions? That goes to Reference Committee No. 3.

DR. RODERICK OGDEN (Kern County): This resolution was presented to and approved by a meeting of a number of delegates from the San Joaquin Valley at the interim hearing in December:

RESOLUTION No. 30

WHEREAS, The American Medical Association and the California Medical Association have extended considerable effort to establish favorable public relations between medical students and organized medicine; and

WHEREAS, The cost of medical education, in tuition, fees and subsistence, has increased to such a degree that a number of students who offer promise of being excellent physicians are either denied that opportunity or greatly hindered in its fulfillment; and

WHEREAS, Concrete evidence of the interest of organized medicine in the problems of medical students, particularly in the rendering of financial aid, would undoubtedly be a very strong factor in establishing good relations between students in training and organized medicine, and would also allow some students, who in later years would reflect credit and honor on medicine, to complete their education; therefore, be it

Resolved, That the Council of the California Medical Association investigate, or appoint a committee to investigate, the possibility of establishing a large and liberally administered Student Loan Fund, and if feasible establish such a fund.

VICE-SPEAKER BAILEY: That goes to Reference Committee No. 3, Dr. Ogden. Thank you. Any further resolutions?

We might say that the San Francisco delegation has changed its time from today to 8:00 a.m. Mon-

day, and then there are several who propose to meet at 5:00 o'clock; I suppose will meet as soon as possible.

... Announcements. ...

... Speaker Charnock assumed the Chair. ...

SPEAKER CHARNOCK: You are, of course, all aware that the Reference Committees are going to meet as designated on the blackboard. Those delegates who wish to appear before the reference committees may do so. These committee hearings are open only to delegates and to alternates. The reference committees may call for such technical help as they need. Is there any more new business to come before this organization?

Dr. Lum has an announcement.

DR. LUM: Mr. Speaker and House of Delegates: There will be copies available at the front desk of the budget for your study. There is one correction to be made. One item was inadvertently omitted. Under Organizational Expense the item now proposed at \$5,000 should be made \$188,000. (Laughter.)

SPEAKER CHARNOCK: Will Reference Committee No. 2 be so informed. Of course they are.

DR. TRUMAN: Mr. Speaker, you announced that the reference committees were open only to delegates and alternates. I believe that this has never been so before and I would like to ask you if this is a new policy or if you have changed the policy or if you are in error.

SPEAKER CHARNOCK: I am taking that on advice of legal counsel. The understanding is that the reference committees are executive sessions and that only the delegates and the alternates go to them.

Dr. Bullock.

DR. BULLOCK: Mr. Chairman, I would like to move that the reference committees be open to all members of the C.M.A.

A DELEGATE: Second the motion.

SPEAKER CHARNOCK: I did not hear you, Dr. Bullock.

DR. BULLOCK: I would like to move that the reference committees be open to all members of the C.M.A.

SPEAKER CHARNOCK: It has been moved and seconded that the reference committees be open to all members of the California Medical Association. Is there any discussion? The Chair hearing none, those in favor of this motion will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: Will the "noes" again vote?

The motion is passed. I might say by way of explanation (laughter)—we had expected the C.P.S. Reference Committee to meet in this room immediately and it was a matter of having them in executive session without going through a nose-counting.

I will entertain a motion to adjourn until 9:30 a.m. Wednesday, May 12, in this room.

A DELEGATE: So moved.

A DELEGATE: Second.

SPEAKER CHARNOCK: It is moved and seconded we adjourn. Those in favor will signify by saying "aye." To the contrary?

... The motion was put to a vote and unanimously carried. ...

SPEAKER CHARNOCK: It is passed.

... The meeting adjourned at 5:20 p.m. ...

Wednesday Morning Session

The Wednesday morning session of the House of Delegates of the California Medical Association was held in the Renaissance Room, Biltmore Hotel, Los Angeles, California. The meeting was called to order at 9:30 a.m. by the Speaker, Dr. Donald A. Charnock, who presided.

SPEAKER CHARNOCK: Will the House please be in order? We will have the supplemental report of the Credentials Committee. Dr. Armanino.

REPORT OF THE CREDENTIALS COMMITTEE

DR. LOUIS P. ARMANINO: Mr. Speaker, a quorum is present.

SPEAKER CHARNOCK: If there is no objection to the House accepting the visual roll call as to the constitution of the House—the Chair hearing none, it is accepted.

The first order of business will be the presentation by our President, Dr. Green. Dr. Molony.

PRESIDENT GREEN: Mr. Speaker, members of the House:

It just so happened that one of the illustrious doctors of the California Medical Association was unable to be present for the acceptance of a Fifty-Year pin for his services to you and to me. The name of the man is Dr. George H. Kress.

Almost everyone here is indebted in some fashion for the services of Dr. Kress. At the Interim Session that we held last winter it might have been in order to present this pin to George H. Kress while he was still living because as of January 1, 1954, he was eligible. But George said, "No, I can't receive it until I have paid the full measure of service."

So at this time your Council has decided that the award will be made to Mrs. Kress by means of Dr. William Molony, also a fifty-year man, and a very close associate and great friend of Dr. George Kress. So with your permission I will award this pin to Mrs. Kress in absentia through Dr. William Molony who will express to her something that I couldn't express. (Applause.)

... The award was presented by President Green. ...

SPEAKER CHARNOCK: During the presentation may I ask the House to rise in respect to Dr. Kress.

PRESIDENT GREEN: William, will you transmit this badge of honor to Mrs. Kress in the name of the California Medical Association?

DR. MOLONY: I will. May I say a word?

SPEAKER CHARNOCK: Yes.

DR. MOLONY: It is fifty years ago this year that I first met Dr. Kress. He came here a year or so after graduation. During these fifty years, and they were very busy and full years for him, he devoted himself constantly and unrelentingly to the interests of medicine in California.

I know no one in my experience, my life in the history of organized medicine in California, who did more for medicine than George Kress. During the hectic years of the beginnings of the organization of the statute books of California, when the chiropractic and osteopathic professions were adjudicated, George Kress was in the front and foremost in that battle. And to his energy, his ability and his brains came most of the ammunition that served to defeat these measures in 1916.

However, history proves that one battle doesn't always turn the course of events. However, regardless of all these things, as long as he lived, as Secretary of the Los Angeles County Medical Association, as Editor of the State Journal, Councilor of the California Medical Association, and as President of the California Medical Association, he was always in the forefront. He gave of his time and energy and his ability for the benefit of organized medicine.

It is a pleasure in one way and in another way it is a sad mission that I have to perform, taking this to Mrs. Kress. I am sure that she will appreciate the great consideration and honor you have paid to the memory of George Kress today, and I thank you very much. (Applause.)

SPEAKER CHARNOCK: Thank you, Dr. Molony. Thank you, Dr. Green. I am sure that this gesture by the House will be greatly appreciated by Mrs. Kress.

I think the House should be informed that the voluminous history on which Dr. Kress was working so hard at the time of his death is now being gathered together and collected and put into shape to be turned over to an appropriate committee.

At this time the next order of business is the Secretary's announcement of the Council's selection of the place for the 1955 Annual Convention. Dr. Daniels.

DR. DANIELS: Mr. Chairman: The Council has selected the dates of May 1 to May 5, 1955, as the dates of the next Annual Session. It is with some regret that we admit it will not be in Los Angeles. San Francisco has been selected and the Palace Hotel will be the headquarters.

SPEAKER CHARNOCK: Thank you, Dr. Daniels. I am sure we will all have a lot of fun. (Laughter.)

The next order of business is the election of officers. The first office to come before you is that of President-Elect. Dr. Sam Sherman of San Francisco.

DR. SHERMAN: Mr. Speaker, Fellow Delegates: If you in the assembled delegation have wondered why most of the San Francisco delegates have conducted themselves this year in a restrained, orderly and perhaps decorous manner (laughter) it is just that we feel the weight of a great responsibility on our consciences and our souls.

We this year have the distinct honor of offering to this convention a name of one of the most distinguished members of our medical society as a candidate to fill the office of President-Elect of the California Medical Association.

San Francisco in the past has contributed many great names to this particular office in the Medical Association. Those of you who have gray heads will probably remember such famous names as Howard Marlow, Morton Gibbons, Jr., and then Karl Schaupp, Sr., and as we go down the line we have other famous names such as Phil Gilman, and of course the last contribution from San Francisco, who has served with distinction as President of the California Medical Association and also as President of the American Medical Association, is none other than John Cline, whom you all know very well.

This year our task in San Francisco was to select a man whose stature was at least equal to that of his predecessors in this respect. Strange as it may seem, it was an easy task for us because we have in our ranks someone whose ability and whose fine qualities of leadership, whose fine gentlemanly qualities as well, have made him a perfect candidate. He, like some of his predecessors who have served as presidents of this organization, has also served his local society as well as his state society well and with great distinction.

He came to California in 1921 after graduating from the University of Michigan in 1919. And another strange coincidence has occurred; he first entered practice with the man who was honored at the beginning of this convention by being awarded a Fifty-Year pin. I refer to Dr. Robert A. Peers. After serving in practice with Dr. Peers he came to San Francisco and of course put himself vigorously into scientific as well as organizational work. He served the San Francisco Medical Society as a director for many years and also as its president and also chairman of many important committees.

He came to the Council of the C.M.A. in 1945 and exhibited such qualities of leadership that it was not long afterwards that he was made chairman of the Council and has served well since then.

He has also had the honor of being president of the National Tuberculosis Association in 1953. Besides this he has a hobby of which he is very proud. This hobby is that he likes to go out through the Golden Gate in San Francisco in a leaky old boat and try to catch salmon. And his wife reports to me that he usually only brings home a head cold and a dead motor. (Laughter.)

In spite of all this I have known this gentleman for almost a quarter of a century in a triple capacity. First I have known him as a teacher to me as a medical student at the University of California.

There he was kind, he was generous in his teaching, and he gave us as students a great deal of wise counsel. I have known him also in the capacity of a colleague in the practice of medicine and as a fine specialist in the treatment of pulmonary diseases to whom I was always proud and privileged to refer my cases of that nature. But lastly, I have known him as a fellow worker in organizational medicine, a man who I felt again exhibited all of the fine leadership qualities and all of the fine things that have acted as an inspiration to those of us who are much younger.

It is because of the untiring efforts and the distinction that this man has in both the scientific and organizational phases of medical activities that it is the unanimous feeling of the San Francisco delegation to this convention that this man's name be offered in nomination to the office as President-Elect of the California Medical Association.

And at this time I feel greatly honored and highly privileged to offer in nomination for this office the name of Sidney Shipman. Thank you. (Applause.)

SPEAKER CHARNOCK: The name of Dr. Sidney Shipman has been placed in nomination.

DR. GRAESER (Alameda County): Mr. Speaker: I would like to second the nomination of Dr. Shipman.

SPEAKER CHARNOCK: Thank you.

DR. SAMPSON (Los Angeles): I should like to second the nomination of Dr. Shipman and move the nominations be closed.

SPEAKER CHARNOCK: It has been moved that the nominations be closed. Is there a second?

A DELEGATE: Second.

SPEAKER CHARNOCK: Those who are in favor will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: The nominations are closed. How will you vote?

A DELEGATE: By acclamation.

SPEAKER CHARNOCK: All those in favor of Dr. Shipman as President-Elect of the California Medical Association will reply with a resounding "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Hearing nothing to the contrary, the election is declared unanimous. I will appoint Dr. Cline of San Francisco and Dr. MacLean of Alameda County to escort Dr. Shipman to the rostrum. (Standing applause.)

Dr. Shipman's election is declared unanimous.

... The Chair was assumed by Vice-Speaker Bailey. ...

VICE-SPEAKER BAILEY: The next order of business is the nomination of the Speaker, California Medical Association House of Delegates. Do I hear any nominations? Dr. Craig.

DR. CRAIG (Los Angeles County): Mr. Speaker, I am not going to take the time of this organization to make a eulogistic speech because all of you know the man whom I am going to present, know him possibly better than I if that is possible, and you know his ability and I am sure you want him to continue in his office. I am placing in nomination for Speaker the name of Donald Charnock. (Applause.)

VICE-SPEAKER BAILEY: Donald Charnock.

DR. DOZIER: Mr. Speaker, it gives me great pleasure to second the nomination.

DR. RANDALL: I should like to second.

VICE-SPEAKER BAILEY: The nomination has been seconded by Dr. Randall of Los Angeles.

A DELEGATE: I move the nominations be closed.

A DELEGATE: Second.

VICE-SPEAKER BAILEY: Those in favor of closing the nominations say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: How will you vote?

A DELEGATE: Acclamation.

VICE-SPEAKER BAILEY: All in favor say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Charnock, you are unanimously elected. (Applause.)

... The Chair was assumed by Speaker Charnock. ...

SPEAKER CHARNOCK: Thank you very much, ladies and gentlemen, for this election.

The next order of business is the election of a Vice-Speaker.

DR. SAMPSON: Mr. Chairman, a man who is known to you all who is the present Vice-Speaker of this body, who graduated with me from the same class in medical school. I have known him for the past—I was going to say twenty-five years but it is awfully close to thirty years by now—and that is an awfully long time. During that time I have known Wilbur Bailey to be an honest man, a man of high integrity.

At this time it gives me great pleasure to place his name before you in nomination for the position of Vice-Speaker.

DR. CHARNOCK: The name of Dr. Bailey has been placed in nomination for Vice-Speaker. Dr. Sherman.

DR. SHERMAN: May I have the honor and privilege of seconding that nomination?

SPEAKER CHARNOCK: It has been seconded by Dr. Sherman. Are there any further nominations?

The Chair hearing none, declares the nominations closed. They are closed. How will you vote?

A DELEGATE: Acclamation.

SPEAKER BAILEY: It has been moved and seconded that we vote by acclamation. All those in favor of

Dr. Bailey staying in his position as Vice-Speaker will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Dr. Bailey is elected. (Applause.)

The next order of business is the election of the District Councilors. Third District Council position is open, Dr. H. Clifford Loos has been nominated. Will the Los Angeles delegation please make their record? Dr. Price of Los Angeles County.

DR. PRICE: Speaker, members of the House: I wish to place the name of H. Clifford Loos in nomination as Councilor of the C.M.A. from the Third District. He has served well and we would like to have him back.

SPEAKER CHARNOCK: The Third District has selected Dr. H. Clifford Loos as their delegate from the Third District. Is there any challenge from the floor?

DR. CRANE: Members of the House of Delegates: I wish to challenge the candidacy of Dr. Loos for two reasons. The first reason, the caucus which nominated him was held at the Statler Hotel and according to the By-Laws this must be a vote of the delegates in secret ballot. At that meeting both delegates and alternates voted and it was not a secret ballot. This is just a technical side of it.

Now from the standpoint of what is more important—I know all of you men who were here at the opening of this session heard Hassard tell us about the bill that is coming before Congress with relation to financing of closed panel practice. I am wondering what our position will be if one of our alternates to the A.M.A., and if one of our Councilors for the California Medical Association is one of the biggest proponents of closed panel practice.

It seems to me where the situation has reached a point where some of our main leaders of the County Medical Society of Los Angeles are letting prevail their deep friendship for Dr. Loos—it is a friendship that I think is wonderful. Cliff is a very likable man. But when these men let their deep friendship for this man interfere with their good judgment in picking him for these high important positions then I think it is time for somebody, even from one of the branches, to get up and protest, if nothing else. (Applause.)

For these reasons, because I feel that this man does not represent the thinking of American medicine, for these reasons I challenge the candidacy of Dr. Loos.

SPEAKER CHARNOCK: Dr. Crane has challenged the candidacy of Dr. Loos according to our By-Laws on the election of Councilors—excuse me, according to our Constitution in the election of Councilors, Article III, Section 11:

"A committee, consisting of the President, the President-Elect and one delegate appointed by the Speaker from the Councilor District involved called the Qualification Committee, shall consider all

grounds upon which the nominee is challenged and report back the House. If the Committee reports in favor of confirming the nominee's election the Speaker shall declare him elected. If the Committee reports against confirming the nominee's election a three-fourths affirmative vote shall be necessary to sustain the report of the Committee."

The chairman can appoint only one member to that committee, the President and the President-Elect are automatically appointed according to the Constitution. The chairman appoints Dr. Lyle Craig as the delegate from the Councilor District No. 3. If you gentlemen will decide that question and report back we will go on to the Sixth District comprising Fresno and the adjacent Districts. Will the chairman of the delegation from the Sixth District speak?

A DELEGATE: Mr. Chairman, point of order, please. Dr. Crane comes from Pasadena. Is that District 4 or District 3?

SPEAKER CHARNOCK: It is Los Angeles County, Doctor. He is from the Los Angeles County district. It is not just District No. 3.

A DELEGATE: Thank you.

SPEAKER CHARNOCK: I will check that for you.

DR. SAMPSON: I would like to raise a point of order again because he is from District 3 and Dr. Crane is from District 4.

SPEAKER CHARNOCK: The Chair stands corrected. May we have the report from the Sixth District while we are finding the man from District 3.

DR. HALLEY: Mr. Chairman, I am Dr. Halley from District 6, chairman of that District, and we have called this in traditional fashion and we present the name of Dr. Henry A. Randel.

SPEAKER CHARNOCK: The name of Dr. Henry A. Randel has been placed in nomination—selection, rather, from the Sixth District. Is there any challenge to Dr. Randel?

The Chair hearing none, declares Dr. Randel elected Councilor from the Sixth District.

The Ninth District, Alameda County.

DR. GRAESER: Mr. Speaker, our delegates met duly and reaffirmed our selection of Dr. Donald Lum.

SPEAKER CHARNOCK: Is there any challenge to the selection of Dr. Donald Lum?

The Chair hearing none, accepts the selection of the Ninth District.

The Eighth District comprising San Francisco has now a vacancy for a two-year term made by the selection of our new President-Elect. Will we hear from the Eighth District?

DR. RIXFORD: Mr. Speaker, I am Emmet Rixford, chairman of the San Francisco delegation. In a caucus meeting more than twenty-fours ago this delegation met and by secret majority vote elected Dr. Sam Sherman as Councilor from the Eighth District to fulfill the vacancy created by the election of Dr. Shipman to the office of President-Elect.

Dr. Sherman is currently President of the San Francisco Medical Society, formerly Director of

that Society, chairman of the Union Health Plan Study Group, and a member of numerous other committees. I have known Dr. Sherman since I first started in medicine many years ago. I know him to be a very vigorous worker, a tireless worker, and a fine and honest man.

Mr. Speaker, it gives me great pleasure to report the result of this election.

SPEAKER CHARNOCK: The Eighth District has nominated Dr. Sherman to represent them. Is there any challenge? The Chair hearing none, declares Dr. Sherman elected.

To clear up the question about Pasadena, may we say that within our Constitution, District No. 3 and District No. 4 both comprise the County of Los Angeles equally, so Los Angeles has two Councilors but anybody within the County of Los Angeles in the Chair's opinion may serve upon that committee, and I shall appoint Dr. Craig to serve upon that committee.

DR. REMMEN: Will that committee hear witnesses or not?

SPEAKER CHARNOCK: There is no provision in the By-Laws for them to do that. What the committee does is to arrive at a conclusion as I just read.

"The Qualifications Committee shall consider all grounds upon which the nominee is challenged and report back to the House."

That can be done at any time during the session.

DR. REMMEN: Mr. Chairman, I would assume then that since they are to consider all grounds that they would hear witness because otherwise, where would they get evidence or information?

SPEAKER CHARNOCK: You are correct, Dr. Remmen. The Qualifications Committee has the opportunity to do that.

DR. CRAIG: Mr. Speaker, this is all out of the blue sky to me and I would like to have some evidence.

SPEAKER CHARNOCK: A question has been raised, gentlemen, when this committee shall meet and who shall be the chairman. According to the Constitution the Qualifications Committee shall consist of the President, the President-Elect and one delegate. It is the ruling of the Chair that the President shall be the chairman, the President-Elect and one delegate, Dr. Craig, shall comprise the balance of the committee. But of course this committee will have to meet when the House is not in session and it is the suggestion that they have their first meeting at noon today in a room which will be announced later. I should suggest that. They will meet in Room 6333. We will adjourn this House at 12:00 o'clock and they can meet. Any member of the House may give testimony.

The next order of business is Councilor-at-Large. First is Dr. Arthur E. Varden from San Bernardino, term expiring.

DR. PRICE (Orange County): Mr. Speaker, I should like to place in nomination the name of Dr. Arthur E. Varden to succeed himself as Councilor-at-Large.

SPEAKER CHARNOCK: The name of Dr. Varden has been placed in nomination.

A DELEGATE: I would like to second the nomination of Dr. Varden.

SPEAKER CHARNOCK: It has been—

A DELEGATE: I should like to second.

DR. MOORE (San Diego): I would like to second the nomination.

SPEAKER CHARNOCK: Are there other seconds? Are there any further nominations for this position?

A DELEGATE: I move the nominations be closed.

SPEAKER CHARNOCK: It has been moved and seconded that the nominations be closed. Those in favor will signify by saying "aye."

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: How will you vote?

A DELEGATE: Acclamation.

SPEAKER CHARNOCK: Those in favor of Dr. Varden to succeed himself as Councilor-at-Large will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: Dr. Varden is elected to succeed himself.

The next position of Councilor-at-Large, Dr. Ivan C. Heron, San Francisco, whose term is expiring. Dr. Rixford of San Francisco.

DR. RIXFORD: Mr. Speaker, as chairman of the San Francisco delegation I have been requested by that delegation to place in nomination for Councilor-at-Large Dr. Ivan C. Heron. Dr. Heron is Past President of the San Francisco Medical Society, Past President of the San Francisco Academy of General Practice, Past President of the California Academy of General Practice, chairman of the Board of the American Academy of General Practice and C.M.A. Councilor-at-Large for the past term. Mr. Speaker, I nominate Dr. Ivan C. Heron for Councilor-at-Large to succeed himself. (Applause.)

SPEAKER CHARNOCK: The name of Dr. Heron has been placed in nomination.

A DELEGATE: I would like to second the nomination of Dr. Heron.

DR. BURWELL (Los Angeles): I would like to second.

DR. DAVIS (Santa Clara County): We should certainly like very much to second the nomination.

SPEAKER CHARNOCK: Are there any further nominations for this position?

A DELEGATE: I move they be closed.

SPEAKER CHARNOCK: The Chair hearing none, declares the nominations closed. How will you vote?

A DELEGATE: Acclamation.

SPEAKER CHARNOCK: Those in favor of Dr. Ivan C. Heron as Councilor-at-Large for a three-year term will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: Dr. Heron is declared elected.

The next order of business is delegates to the American Medical Association elected for a term of two calendar years, to serve for two calendar years starting January 1, 1955. The first office is that of the incumbent, Dr. H. Gordon MacLean of Oakland.

DR. MACLEAN: Mr. Speaker and members of the House: Being the incumbent delegate to the A.M.A. I wish to state I am not a candidate for that office. Therefore I would like to present to you in nomination a man who has many qualifications. He has served in two county medical societies, which is quite unusual, on the Council of the Contra Costa Medical Society and president of that organization, and one of the original Councilors of the Alameda-Contra Costa Medical Association. He also has served the C.M.A. on medical committees, on the Committee of Fee Schedules, you will remember, which was a very tough job, and he has been chairman of the Committee on Medical Economics.

Also, from a civic standpoint, a few years ago he was named the Citizen of the Year in Richmond, California. He also has been the leading and guiding light in the building of the new hospital out there. In case you think this man is purely serious I assure you he also has a great sense of humor. He has been voted in the A.M.A. the very finest plastic cheese sandwich maker. And I assure you, if you doubt any of those statements, if you would consult with Dr. Robertson Ward and Dr. Pete Green you will find out that he is exactly what I say.

However, he really, in spite of some of these latter qualifications, is a very active man and I wish to give you in nomination the dean of alternates. He has served as dean of alternates for many years, L. H. Fraser. (Applause.)

SPEAKER CHARNOCK: Dr. Fraser's name has been placed in nomination. Dr. Atwood.

DR. ATWOOD: It gives me great pleasure to second the nomination of the unanimous choice of our delegation, Dr. Fraser. (Applause.)

SPEAKER CHARNOCK: Dr. Fraser's name has been seconded.

DR. MILLER (San Mateo County): It gives me great pleasure to second that nomination and keep him behind the eight ball. (Laughter.)

SPEAKER CHARNOCK: It has been seconded. Do I hear any further nominations for this position? The Chair hearing none, declares these nominations closed. Those who are in favor of Dr. Fraser as a delegate to the American Medical Association for a two-year term behind the eight ball (laughter) will please signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Dr. Fraser is unanimously elected.

The second position is Dr. E. Vincent Askey of Los Angeles, term expiring.

DR. COOK (Los Angeles): Mr. Speaker, Dr. Askey needs no introduction to this group. It gives me great pleasure to nominate Dr. Askey for delegate to the American Medical Association to succeed himself.

SPEAKER CHARNOCK: Are there any further nominations for this position? I am afraid we would be behind the eight ball if we nominated anybody else. (Laughter.)

The Chair hearing none, declares the nominations closed. They are closed. Those in favor of Dr. E. Vincent Askey for this position will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Dr. Askey has been elected.

The next position is that held by Dwight L. Wilbur of San Francisco, term expiring.

DR. RIXFORD: Mr. Speaker, as chairman of the San Francisco delegation I have been requested by that delegation to nominate as delegate to A.M.A. Dr. Donald M. Campbell.

Dr. Campbell is currently a director of the San Francisco Medical Society. He is past secretary-treasurer and chairman of the Finance Committee of that society. He is the current President of the San Francisco Academy of General Practice. He has been chairman of the C.M.A. Committee on Problems of the Aging, and chairman of the National Academy of General Practice Committee on Problems of the Aging. He is chairman of the Northern Section of the Public Health League.

Mr. Speaker, I nominate Dr. Donald M. Campbell.

SPEAKER CHARNOCK: The name of Dr. Campbell has been placed in nomination. Dr. Garland.

DR. GARLAND: Mr. Speaker and members of the House: I think we all agree that change is good and that there are times when it is essential, but change is not automatically good at all times. Experience and training in the techniques of dealing with medical organizational problems on the national level come slowly. Dr. Dwight Locke Wilbur, because of his long familiarity with the scientific and organizational problems facing us in medicine, both in San Francisco, in California and in the United States as a whole, and because of his own stature as an outstanding physician is particularly fitted for this position. It is therefore my privilege as a member of the San Francisco delegation to nominate Dr. Wilbur to succeed himself as delegate.

SPEAKER CHARNOCK: The name of Dr. Wilbur has been placed in nomination.

PAST PRESIDENT GOIN: Mr. Speaker, members of the House of Delegates: This is the first occasion on which I have appeared on the floor of this House in my capacity as an ex-officio delegate, ex-officio member of the House, and I am happy for the occasion of my appearance which is to second the nomination of Dr. Dwight Wilbur for the position of delegate to the American Medical Association. The office of

delegate to the American Medical Association is an extremely important office and one which becomes more important annually with the increasing complexities of the problems which confront American medicine.

Dr. Wilbur is a man with six, perhaps eight years' experience in the House of Delegates. Dr. Wilbur is a man of unquestionable integrity and honor and of great intellectual ability, and for these characteristics is respected unanimously by the members of that House. From the vantage point of ten years of service in the House I might tell you that there are certain similarities between the House of Delegates with the American Medical Association and the U. S. Senate. In particular, almost all things get done in committees and appointment to committees goes almost entirely by seniority, and this is particularly true of appointment of chairmen of committees. So if a man is to do his work, if he is to contribute his thinking, if he is to put in his ability it is important that he have enough seniority to become a member or chairman of the various committees.

For this reason, and with great pleasure, I second the nomination of Dr. Wilbur, and I say that it is my serious and considered judgment that to fail to return him to office would be a serious and costly error. (Applause.)

DR. HERON: Mr. Speaker, members of the House: I would like to speak for the candidacy of Donald Campbell. I have known Dr. Campbell for—well, ever since he came down from Canada to intern at Stanford with me. Since then we have practiced in the same hospital group.

Dr. Campbell is a general practitioner. He is a grass roots practitioner. During all his term in this hospital he has earned the respect and the affection of his confreres. He has taken a great deal of interest in organized medicine and he does have a very great interest in the future of our organization. I can recommend Dr. Campbell as a very worthy addition to our very worthy delegation at the A.M.A. It is true that he might now and then tell a Highland story, but being half Scotch myself, not full, you will notice. I don't think that is so bad. I therefore take great pleasure in seconding the nomination of Donald Campbell. (Applause.)

DR. MACLEAN: Mr. Speaker, members of the House: As chairman of the delegation to the A.M.A. I have observed our incumbent, Dr. Wilbur. He is everything that Dr. Goin said he was. It gives me great pleasure to second his nomination.

SPEAKER CHARNOCK: Dr. Ewing Turner from Los Angeles County.

DR. TURNER: Mr. Speaker, members of the House: It seems to me that medicine today is up against some very trying times, and it seems to me that in these trying times organized medicine needs men of experience to direct the policies in the A.M.A. Therefore, it gives me great pleasure in seconding the nomination of a man who has intelligence, who has experience and a willingness to work. It gives

me great pleasure in seconding the nomination of Dr. Dwight L. Wilbur.

SPEAKER CHARNOCK: Dr. Price from Orange County.

DR. PRICE: Mr. Speaker, members of the House of Delegates: The chairman of the Orange County representatives has asked me—and I being one of those usurpers of the \$6,000 and \$25 a day, and sitting and listening to the counsel of Dr. Dwight Wilbur and all of the help that he has given me in my novice stage—it gives me great pleasure for the Orange County delegation to second the nomination of Dwight L. Wilbur. (Applause.)

SPEAKER CHARNOCK: Are there any further nominations for this position? Dr. Bender from San Francisco.

DR. BENDER: Mr. Chairman, members of the Delegation: I have had nothing to do whatsoever as a member of the San Francisco delegation with the nomination of either man. I have no interest in the political aspirations or the success of either man. In my estimation they are both pretty good men. I am interested only in representative government. As I pointed out last December, when the issue came up of a contest between two men in the Los Angeles delegation, the delegate which nominates a candidate is in the best position to know whether or not that candidate is the best representative of his constituents at home. The doctor in the area which is represented by a delegate has no other way to express his opinion of how the affairs of the American Medical Association shall be carried on excepting through the delegation and the selection by the delegation of a nominee for that office.

Therefore, I urge you to vote in the interest of pure representative government for the nomination of the San Francisco delegate.

SPEAKER CHARNOCK: Dr. Cline.

DR. CLINE: Mr. Speaker, I would like to call to the attention of the House that this House represents California, that it does not represent when it sends its delegates to the A.M.A. any individual segment of California. They go there as representatives of California to carry out your wishes, and I think that it is improper to ask for support or opposition to a candidate on the basis that he happens to come from a particular location. (Applause.)

SPEAKER CHARNOCK: Are there any further nominations for this office? The Chair hearing none, declares the nominations closed. They are closed.

If you will look in your pocket you will find a ballot. On ballot number one you will write the name of the gentleman whom you desire. The Chair appoints Dr. Stanley Truman of Alameda, Dr. Louis Bullock of Los Angeles and Dr. Dave Dozier of Sacramento as tellers.

A DELEGATE: Mr. Young has asked me to announce that twenty-three alternates from Los Angeles do not have their ballots. You will please go to the rear of the room and pick up your book of ballots up there. Thank you.

SPEAKER CHARNOCK: Will the secretaries of each delegation see that only the accredited delegate or alternate vote, and will the tellers please watch from whom they are collecting ballots. The ballots are supposed to go only to those people seated in the House.

SPEAKER CHARNOCK: At this time while this balloting is going on we can save a little time by going on with the selection of delegates of A.M.A. The next office is that held by Dr. Donald Cass of Los Angeles, term expiring.

DR. GOIN: Mr. Speaker, members of the House: During the past eight years the nominee that I am suggesting to you has served on the team very ably as a delegate to the American Medical Association. It is very fitting that he be renominated. So at this time I would like to place in nomination the name of Donald Cass to succeed himself for two years. (Applause.)

SPEAKER CHARNOCK: The name of Dr. Donald Cass has been placed in nomination. Are there any further nominations for this position?

A DELEGATE: I move the nominations be closed.

SPEAKER CHARNOCK: It has been moved and seconded that the nominations be closed. Those in favor will signify by saying "aye." Contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: I presume you will vote by acclamation. Those in favor of Dr. Donald Cass will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Dr. Cass is unanimously elected.

The position of J. Lafe Ludwig of Los Angeles, term expiring.

DR. WADSWORTH (Los Angeles): It gives me pleasure to present to you the name of J. Lafe Ludwig to succeed himself. He has been exceptionally active and particularly apt in this opportunity given him to serve us in the House of Delegates of the A.M.A. I know of nobody who has his, shall we call it, political aptitude of meeting a man once and knowing him from then on. I strongly urge you to send him back to represent us.

SPEAKER CHARNOCK: The name of Dr. J. Lafe Ludwig has been placed in nomination. Are there any further nominations for this position? The Chair hearing none, declares the nominations closed.

Those who are in favor of Dr. J. Lafe Ludwig will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: Dr. Ludwig is elected. Are there any further ballots in the contest from regularly seated delegates? Are there any further ballots? This is your last chance.

The balloting is now closed.

The position is that of Dr. R. Stanley Kneeshaw of San Jose, term expiring.

DR. RAY (San Mateo): It is a great pleasure to place in nomination the name of R. Stanley Kneeshaw to succeed himself. Dr. Kneeshaw was for some nine years Councilor of this society and a Past President, and it is indeed an honor to place his name in nomination. (Applause.)

SPEAKER CHARNOCK: The name of Dr. R. Stanley Kneeshaw has been placed in nomination.

A DELEGATE: I should like to second the nomination of Dr. Kneeshaw. There is no controversy in our district. (Laughter.)

SPEAKER CHARNOCK: Are there any further nominations for this position? The Chair hearing none, declares the nominations closed. Those in favor of Dr. R. Stanley Kneeshaw of San Jose will signify by saying "aye." To the contrary?

There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Dr. Kneeshaw is unanimously elected.

... The Chair was assumed by Vice-Speaker Bailey. ...

VICE-SPEAKER BAILEY: Next is Dr. Leopold Fraser, an alternate to the American Medical Association. The incumbent is Dr. Leopold H. Fraser of Richmond, alternate to H. Gordon MacLean. Do we have a nomination for this position?

DR. DAVID DUGAN (Alameda County): The Alameda-Contra Costa County delegation has given me the privilege of nominating for this high office a man in our group in whom we all have the utmost confidence. His presence on this floor for the past twelve years, during which time he has never missed a caucus, as well as his background of experience, having been a President of our County Society, a member in good standing for many years as well as the chairman of the Malpractice Committee makes his qualifications unquestionable. It gives me a great deal of pleasure to submit Dr. C. E. Attwood for this position.

VICE-SPEAKER BAILEY: Dr. Cy Attwood has been nominated. Dr. Hodges.

DR. HODGES: I have known Dr. Attwood for a number of years. You can do no better than to elect Dr. Attwood. I would like to second this nomination.

VICE-SPEAKER BAILEY: Dr. Attwood has been seconded. Is there anything further? We will declare the nominations closed. Will you vote by acclamation? All those in favor will say "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Attwood is elected.

Second is Dr. H. Clifford Loos of Los Angeles, present alternate.

DR. HOFFMAN (Los Angeles): Mr. Speaker, ladies and gentlemen of the House: In view of his past experience and in view of his service to his state

organization, I wish to nominate Dr. H. Clifford Loos to succeed himself as alternate. Thank you.

VICE-SPEAKER BAILEY: Any further nominations? The Chair hearing no further nominations, declares the nominations closed. They are closed. Will you vote by acclamation? All those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote...

VICE-SPEAKER BAILEY: Dr. Clifford Loos is elected, there being—well, I think we'd better have a standing vote. We always have to get these things straight or it can, of course, be a secret ballot. As a matter of fact, Mr. Speaker, I think it should be a secret ballot. We want—(Applause.)

Well, we will try it again. How do you want to vote, by acclamation or secret ballot?

A DELEGATE: Secret ballot.

VICE-SPEAKER BAILEY: That is the end of it. If there is ever a request for a secret ballot there has to be one. It will be on ballot number two and the question will be whether you wish to sustain Dr. Loos or not.

A DELEGATE: Mr. Chairman, point of order. It is not automatic to make a secret vote. You have a right to move a secret ballot, whereupon you take a vote as to whether you wish a secret ballot. I think that that should be done if anybody desires a secret ballot then they can move that we have a secret ballot. Otherwise it does not automatically go in.

VICE-SPEAKER BAILEY: Well, you are right with this being a point. We then shall ask for the motion to be a secret ballot and that will give us a vote on it.

A DELEGATE: Mr. Chairman, I move we have a vote on the second ballot.

VICE-SPEAKER BAILEY: It has been moved. Is there a second?

A DELEGATE: Second.

VICE-SPEAKER BAILEY: Is there further discussion? Those in favor of the secret ballot will say "aye." Opposed?

DR. LUM: Mr. Speaker, for a point of order, exactly what are we voting on on this ballot? There is one name that has been nominated.

VICE-SPEAKER BAILEY: We are voting whether to sustain the one name, whether this man—if you vote yes you vote to sustain Dr. Loos. If you vote no you are voting against Dr. Loos. And it must be yes or no. Yes sustains Dr. Loos and no is against him.

Will the tellers please pass the ballots out, ballot number two.

The tellers will be Dr. Dozier, Dr. Burt Davis and Dr. Sam Randall.

DR. SAMPSON: Mr. Chairman, I rise to a point of order. It seems to me that there is only one name, that we vote yes or we don't vote.

A DELEGATE: Will you repeat those names?

VICE-SPEAKER BAILEY: Dr. Dozier, Dr. Davis and Dr. Randall. Will you please collect the ballots? This will be vote number two, the coffee-colored ballot.

A DELEGATE: Mr. Speaker.

VICE-SPEAKER BAILEY: Yes.

A DELEGATE: What happens if the noes win?

VICE-SPEAKER BAILEY: Nothing happens.

A DELEGATE: Mr. Chairman, wouldn't this be less confusing if we knew what to do? There is a question before the House and it has not been decided. That will be decided at some later time today.

VICE-SPEAKER BAILEY: Well, no, it better be—

A DELEGATE: I would like to see that held over until some other time today.

VICE-SPEAKER BAILEY: No, I think we have to proceed with the election. We have already announced it and we will have to proceed with it and then decide what to do next.

Now, Dr. Cass, were you recognized? This is to talk on the subject of Dr. Doughty?

DR. CASS (Los Angeles): I would like to nominate J. Frank Doughty to succeed himself to the A.M.A. House of Delegates. Dr. Doughty is a very active member of the Rural Health Commission of the American Medical Association.

VICE-SPEAKER BAILEY: Dr. Doughty has been nominated to succeed himself.

DR. ARMANINO (San Joaquin County): I would like to second the nomination of Dr. Doughty.

VICE-SPEAKER BAILEY: The nomination of Dr. Doughty has been seconded. Are there any further nominations? The Chair hears no further nominations and therefore declares the nominations closed. How will you vote? By acclamation? All those in favor of Dr. Doughty will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried...

VICE-SPEAKER BAILEY: Dr. Doughty is declared elected.

Next is the office of Dr. J. Norman O'Neill of Los Angeles, alternate for Dr. Cass. Do I hear nominations?

DR. LONG (Los Angeles): I would like to nominate J. Norman O'Neill to fill his own shoes. I might remind you these have always been working shoes and they are always pointed in the right direction. I would like to nominate J. Norman O'Neill to succeed himself as an alternate to Dr. Cass.

VICE-SPEAKER BAILEY: Dr. J. Norman O'Neill has been nominated to succeed himself as an alternate to Dr. Cass. Are there any further nominations to the office? There are no further nominations to the office, therefore the nominations are declared closed. Will you vote by acclamation? All those in favor of Dr. O'Neill will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried...

VICE-SPEAKER BAILEY: Dr. O'Neill is declared elected.

Next is Dr. H. Milton Van Dyke of Long Beach. Are there any further nominations for this office? Dr. Ewing Turner.

DR. TURNER: As chairman of the Los Angeles delegation, I'd like to place in nomination the name of H. Milton Van Dyke of Long Beach to succeed himself.

VICE-SPEAKER BAILEY: Dr. Milton Van Dyke to succeed himself. Are there any further nominations?

A DELEGATE: Move the nominations be closed.

VICE-SPEAKER BAILEY: Move to close the nominations.

A DELEGATE: Second it.

VICE-SPEAKER BAILEY: All those in favor of closing the nominations will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: You will vote by acclamation? All those in favor of Dr. H. Milton Van Dyke will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Van Dyke is declared elected.

Next, Dr. Burt Davis—Doctor.

VICE-SPEAKER BAILEY: Dr. Burt Davis is next. Do we hear anyone?

DR. MILES (Monterey County): The qualities we seek in a person that we select as an alternate or delegate to the A.M.A. should have these qualifications: capacity to work, capacity to make friends, capacity for organization, and I might add a just plain capacity. (Laughter.) The man whose name we place in nomination certainly has the first three qualifications and I haven't taken it upon myself to challenge him on the fourth. (Laughter.)

We of the Seventh District have had the opportunity to see his readiness to serve in any capacity that we ask. We have seen the tenacity with which he has fought for what he thought was right. When he is given a job he keeps working at it or goes down swinging. His dedication to the cause of organized medicine takes up a great part of his working time. He has one other quality I think unique. As one looks down the roster of doctors' names we see a lot of initials placed here and there, either front or back, but this man has a name that is unique. It gives it a quality that is easy to remember and that is just plain Burt Davis.

Once you meet Burt you remember him. And I think that that quality is something that we sometimes overlook because if you remember the man, you remember what he has said, and I think that is true here and I think that will be true at the A.M.A. Convention.

I think that Dr. Bender will agree too that we are getting our money's worth sending Burt back because I don't think I could send him for freight. (Laughter.) You have to send him first class.

So I say, let's spend our money well and elect Burt Davis as an alternate to succeed himself.

VICE-SPEAKER BAILEY: Is there a second? Dr. Burt Davis has been nominated.

DR. FOX (Santa Clara): I wish to second the nomination of Dr. Burt, "R" for Resolution, Davis. (Laughter.)

VICE-SPEAKER BAILEY: Burt "R" for Resolution, Davis. Any further nominations? There being none, the Chair declares the nominations closed. Will you vote by acclamation?

A DELEGATE: Yes.

VICE-SPEAKER BAILEY: All those in favor of Dr. Davis will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Davis is declared elected.

... The Chair was assumed by Speaker Charnock. ...

SPEAKER CHARNOCK: The tellers have reported in the first ballot, Dr. Wilbur, 184; Dr. Campbell, 89; a total of 273 ballots cast. Dr. Wilbur is declared elected. (Applause.)

The next offices open are those for C.P.S. Trustees. According to the Constitution and By-Laws of C.P.S., nominations for Trustee are made by the Council of the California Medical Association. The names that you have before you are as follows: C. Glen Curtis of Brea; Philip N. Baxter of Oakland; Thomas N. Foster of San Jose; J. Norman O'Neill of Los Angeles. Are there any nominations from the floor for these positions?

DR. SHIPMAN: Mr. Speaker and members of the House: The Council a few weeks ago also nominated a businessman, Ransome Cook, Senior, Vice-President of the American Trust Company of San Francisco. (Applause.) It was uncertain whether Mr. Cook would accept this nomination. He was in Asia at the time. So when he returned I took him to lunch and asked him if he would be willing to serve again. He had done such outstanding service for C.P.S. in the past that I told him that the Council's opinion was that we needed the very highest quality of business management in C.P.S. and we knew of no one who could give it to us better than Ransome Cook. And finally, after some reluctance, he agreed.

The Council therefore would like to place in nomination the name of Ransome Cook of San Francisco in addition to the four names you have heard.

SPEAKER CHARNOCK: The name of Mr. Ransome Cook is added to that list of four. We can vote for them singly or in toto.

A DELEGATE: In toto.

SPEAKER CHARNOCK: It is the opinion of the House that they will vote in toto. Are there any other nominations for these positions as C.P.S. Trustees? The House will understand that the name of Mr. Ransome Cook is an additional vacancy. There is no contest. There are the five positions open. Are there any further nominations?

A DELEGATE: Move the nominations be closed.

SPEAKER CHARNOCK: The Chair hearing none, declares the nominations closed. They are closed. Those who are in favor of this group of gentlemen will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: They are unanimously elected.

We will now have an announcement by the Secretary of the Council's nomination of members of Standing Committees for approval of your ballot.

DR. DANIELS: Mr. Speaker: The Committee on Associated Societies and Technical Groups—incidentally, the Committee on Committees was composed of Dr. Dwight Wilbur, Dr. Clifford Loos and Dr. Francis West, and their nominations are as follows:

Committee on Associated Societies and Technical Groups: Dr. Charles E. Grayson, Sacramento.

Committee on History and Obituaries: Dr. J. Marion Read, San Francisco, Chairman—Reappointed.

Committee on Hospitals, Dispensaries and Clinics: Dr. Jay J. Crane, Los Angeles, Chairman—Reappointed.

Committee on Industrial Practice: Dr. John E. Kirkpatrick, San Francisco.

Committee on Medical Economics: Dr. L. H. Fraser, Richmond, Chairman—Reappointed.

Committee on Medical Education and Medical Institutions: Dr. Loren R. Chandler, San Francisco.

Committee on Military Affairs and Civil Defense: Dr. Justin J. Stein, Los Angeles, Chairman—Reappointed.

Committee on Postgraduate Activities: Dr. J. E. Young, Fresno—Reappointed.

Committee on Public Policy and Legislation: Dr. Dan O. Kilroy, Sacramento—Reappointed.

Committee on Scientific Work: Dr. George C. Griffith, Los Angeles.

Physicians' Benevolence Committee: Dr. Axcel E. Anderson, Fresno, chairman—Reappointed.

Committee on Public Relations: Dr. Frank MacDonald, Sacramento—Reappointed, and Dr. J. Lafe Ludwig, Los Angeles—Reappointed.

SPEAKER CHARNOCK: You have just heard the selections made by the Committee on Committees for your approval. Do I hear a motion approving this selection, these selections?

A DELEGATE: So moved.

SPEAKER CHARNOCK: It has been moved and seconded that the House approve these selections. Those who are in favor will signify by saying "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: They are approved.

... Announcements. . . .

SPEAKER CHARNOCK: Have the tellers reported on that last vote? May we have the report of the tellers on this?

DR. DOZIER: "Yes," 50, and "no," 189. (Applause.)

SPEAKER CHARNOCK: I will ask Hap Hassard to come up and please clarify the problem with us.

MR. HASSARD: Mr. Speaker, I have to beg for a little time. I have gone through Roberts Rules of Order, the By-Laws of the California Medical Association, and I am stuck at the moment because the By-Laws of the C.M.A. on an election of delegates and alternates to the A.M.A. refer to the By-Laws of the American Medical Association. We don't have them here at the moment. (Laughter.) May I defer the answer for a little while?

SPEAKER CHARNOCK: We will defer that answer for a moment.

Dr. Turner.

DR. TURNER: Mr. Speaker, if it is in order, the Los Angeles delegation would like to caucus before this item on the agenda is presented on the floor.

SPEAKER CHARNOCK: Would you care to caucus at this time or at 12:00 o'clock, or at what time do you wish to caucus?

DR. TURNER: Before this item is going to be presented.

SPEAKER CHARNOCK: All right, we will give you an opportunity then before Legal Counsel comes up with his answer and go on. We will give you the opportunity to caucus.

DR. TURNER: Do you want us to caucus now?

SPEAKER CHARNOCK: I'd just as soon get on with the business until some future time. If you will give us the place where you will caucus—

DR. TURNER: We will caucus in Room 7334 at 12:00 o'clock. Room 7334 at 12:00 o'clock. There will be a caucus of the Los Angeles delegation. Thank you.

DR. CRANE: Mr. Speaker.

SPEAKER CHARNOCK: Yes.

DR. CRANE: May I call to your attention that this other committee that you have appointed is meeting at the same time. How are we going to—

SPEAKER CHARNOCK: I realize that. If the Secretary of the Los Angeles delegation will appoint another hour for his caucus, there is a committee meeting at that time.

DR. TURNER: We'd just as soon caucus now, Mr. Speaker.

SPEAKER CHARNOCK: All right, what length of time will you require for your caucus?

DR. TURNER: Probably twenty minutes.

SPEAKER CHARNOCK: The Chair will declare a recess for twenty minutes.

... Recess. . . .

SPEAKER CHARNOCK: Ladies and gentlemen, your attention just a moment. If you gentlemen from San Francisco think you have troubles (laughter) go up to Room 7334. I think it will be quite impossible to get the Los Angeles delegation back on the floor by 12:00 o'clock. With your permission we will declare the House in recess until 1:00 p.m.

... The meeting adjourned at 11:30 a.m. . . .

Wednesday Afternoon Session

The Wednesday afternoon session of the House of Delegates of the California Medical Association was held in the Renaissance Room, Biltmore Hotel, Los Angeles, California. The meeting was called to order at 1:30 p.m. by the Speaker, Dr. Donald A. Charnock, who presided.

SPEAKER CHARNOCK: I am now informed there is a quorum present. May we be in order?

May we have the report of Reference Committee No. 1, Dr. Moore of Ventura? Will you please be in order, gentlemen.

REPORT OF REFERENCE COMMITTEE No. 1

DR. J. W. MOORE, Chairman: Mr. Speaker, members of the House of Delegates: I would first like to thank the members of the Reference Committee, Dr. Thomas J. Dozier of Antioch and Dr. Dave Dozier of Sacramento, for their help and assistance in preparing this report, and I would like also to present my thanks to Mrs. Barbara Rooney for serving as secretary to this committee.

Reference Committee No. 1 has reviewed the reports of the general officers, the Councilors, the standing and special committees of the California Medical Association. All of these reports are printed in the Annual Reports Bulletin and such additional reports as were made were heard at the opening session of this House of Delegates. The report of this Reference Committee will be presented in three sections for action by this House. The first section will be devoted to consideration of the reports of the officers, Councilors and special and standing committees in general.

The second section will be devoted to special comment on the report of the Blood Bank Commission and the Cancer Commission.

The third section will be devoted to a consideration of the reports of the Medical Services Commission.

Section 1. This committee wishes to commend the officers, Councilors and members of the various committees for their splendid work during the past year for our Association. Their reports reflect the devotion of a great deal of time and energy in the performance of their duties and they show splendid accomplishment in the furtherance of the ideals and objectives of the California Medical Association. This committee finds all of these reports in order and recommends their acceptance by the House.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be accepted. Is there any discussion? Those in favor will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

DR. MOORE: Section 2.—Our committee wishes to comment upon the report of the Committee on Postgraduate Activities. We feel that this committee

has continued to do excellent work in making available postgraduate programs for the members of this Association who practice in rural areas. We note that the report requests the House of Delegates to direct the Council to continue the allocation of funds for the support of this postgraduate program. We believe this is a very worthwhile expenditure of funds and recommend its approval. We also wish to comment on the report of the Cancer Commission. We feel that the activities and accomplishments of the Cancer Commission continue to be a strong force and agency for the protection of the health of the people of this state and through the years have brought a great deal of credit to themselves as well as the California Medical Association. We wish particularly to commend their fine work. The committee wishes again also to commend Dr. John Upton, chairman, and the other members of the Blood Bank Commission on their outstanding work in the field of blood bank development and operation.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: This section of the report has been moved and seconded. Is there any discussion? Those in favor will signify by saying "aye." Contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

DR. MOORE: Section 3—the Medical Services Commission Report. Prolonged hearings and discussions were held on the report of the Medical Services Commission. We feel that certain points warrant emphasis and elaboration. Their report represents the culmination of studies over a period of years by the C.M.A.-C.P.S. Study Committee and the Medical Services Commission. These bodies have carried on extensive investigations with the assistance of competent professional advice in the fields of insurance, prepaid medical care and public relations.

It is the opinion of your Reference Committee that the report points up the desirability for defining a basic policy for the C.M.A. The proposals embodied in the report amount to the establishment of such a policy. It should be emphasized that the adoption of these proposals does not close the door to the consideration of other solutions to these problems which may be proposed in the future. It should also be pointed out that these proposals do not restrict the participation of private commercial insurance carriers, writing health insurance contracts.

This Reference Committee wishes to make it clear that the implementation of the proposal in this report is embodied in specific resolutions which were submitted to the House at its first session. These resolutions will be discussed in the reports of other Reference Committees at this session. The acceptance of the Medical Services Commission report is recommended by this committee, subject to the action of the House upon the specific resolutions.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be adopted. Is there any discussion? All those in favor of this section of the report will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

DR. MOORE: Mr. Speaker, I move the adoption of the report as a whole.

SPEAKER CHARNOCK: It has been moved and seconded that this report as a whole be accepted. Is there any discussion? Those in favor will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: This report is accepted in whole.

Thank you very much, and we wish to thank all the members of your Reference Committee.

At this time we will take up the report of Reference Committee No. 3, Dr. Hadley, chairman.

REPORT OF REFERENCE COMMITTEE No. 3

CARL M. HADLEY, Chairman: Mr. Speaker, and members of the House of Delegates: Reference Committee No. 3, composed of Drs. Helen B. Weyrauch of San Francisco, Samuel B. Randall of Santa Cruz, and myself, Carl Hadley of San Bernardino, chairman, was assigned nineteen resolutions for consideration. We have met various delegates in studying these resolutions and submit the following report:

Resolution No. 1, introduced by Dr. Sidney J. Shipman for the C.M.A. Council.

This resolution was introduced upon request by the San Diego County Medical Society. It deals with the granting of an Honorary Membership to Dr. William Henry Geistweit, Jr., as a reward for the years of service to the San Diego County Medical Society and the California Medical Association. Your committee recommends "Do Pass."

Mr. Speaker, I move the adoption of this portion of the report.

SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report. Is there any discussion? All those who are in favor of accepting this section of the report will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is accepted.

DR. HADLEY: Resolution No. 2, introduced by Sidney J. Shipman, changes the second "Whereas," where the words "now need" were crossed out and the word "desire" substituted, your committee recommends this resolution "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Is there any discussion? Those in favor will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is accepted. Will you proceed?

DR. HADLEY: Resolution No. 3, introduced by Dr. Sidney J. Shipman for the C.M.A. Council.

This refers to the Usual-Fee Indemnity Plan. We have hyphenated the words "Usual-Fee" and recommend that this resolution "Do Pass" as amended.

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Is there any discussion? Those in favor of accepting this section of the report will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is accepted.

DR. HADLEY: Resolution No. 4, introduced by Dr. Shipman for the C.M.A. Council.

In error this resolution was introduced out of order. It should have preceded Resolution No. 3. We agree in principle with this resolution and recommend "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: The adoption of this section of the report has been moved and seconded. Is there any discussion? Those in favor of adopting this section of the report will signify by saying "aye."

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is accepted.

DR. HADLEY: Resolution No. 6, introduced by Dr. Shipman for C.M.A. Council.

This resolution is on the subject of enlarging the Medical Services Commission. This has been recommended by the Council and your committee agrees in principle with it and recommends "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: It has been moved and seconded that we accept this section of the report. Is there any discussion? Those in favor will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is accepted.

DR. HADLEY: Resolution No. 7, introduced by J. Lafe Ludwig of Los Angeles.

This resolution is on the subject of foreign trained physicians and licensure. In the second "Whereas" we have struck the word "conscientious" and substituted the word "true." In the second "Resolved" after "Board of Medical Examiners" we have added "and the American Medical Association." Your committee recommends that this amended resolution "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: It has been moved and seconded that we adopt this section of the report. Is there any discussion? Those in favor will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: It is accepted.

DR. HADLEY: Resolution No. 8, introduced by J. Lafe Ludwig of Los Angeles.

The subject of this resolution is foreign trained physicians and quality of medical care. Inadvertently this resolution was incorrectly mimeographed in that the "Resolved" paragraph should read as follows:

"Resolved, That the California Medical Association instruct its Delegates to the American Medical Association to introduce and press for adoption a resolution disapproving intern or resident training of foreign trained physicians who are ineligible for licensure in the United States, except those bona fide foreign graduates selected for training in this country and who return at the termination of said training."

Would you please correct your copy of the resolution by deleting the words "directing the Council on Medical Education and Hospitals of the A.M.A. to withhold approval of any institution that accepts for" and insert the word "disapproving" and then on the same line and after the words "resident training" insert "of."

The committee agrees with this resolution as corrected and recommends "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

... The Chair was assumed by Vice-Speaker Bailey. ...

VICE-SPEAKER BAILEY: Moved and seconded that this section of the report be adopted. Is there any discussion? There is discussion.

DR. JULIUS KAHN (Los Angeles): Thank you, Mr. Chairman.

I would like to know what is meant by "ineligible for licensure in the United States."

VICE-SPEAKER BAILEY: That is a point of information. Would you care to answer it for us, Dr. Hadley?

DR. HADLEY: I would like to ask Mr. Hassard.

... Discussion off the record. ...

VICE-SPEAKER BAILEY: Will you yield to Mr. Hassard?

MR. HASSARD: Of course, actually the requirements for license here in the United States vary somewhat state to state. There are a number of states that have requirements for eligibility that preclude the graduates of certain foreign schools from becoming eligible under certain circumstances. There is, however, no uniform requirement in each and all the forty-eight states.

DR. KAHN: While you are here, Mr. Hassard, I would like to know how this would change present practice.

MR. HASSARD: Well, the—

DR. KAHN: How the resolution would change the present practice?

MR. HASSARD: Unfortunately I do not know the present practice in all of the hospitals of the United States. It would be impossible for me to answer that question. I know that in California but I do not know it in the rest of the country.

VICE-SPEAKER BAILEY: Do you wish to know in California, Dr. Kahn?

DR. KAHN: Yes.

VICE-SPEAKER BAILEY: Would you wish to tell us what is the practice in California? What the practice is in California and how it would be altered? That is your question, Dr. Kahn?

MR. HASSARD: Yes, sir. In California we have a specific provision in the Medical Practice Act that permits intern and residency training up to a maximum period of time for physicians who are not licensed here who have registered with the Board of Medical Examiners. We have a provision that as to graduates of foreign medical schools such graduates are not eligible for licensing in California unless physicians licensed here could go to the country from which the foreign graduate graduated and be eligible for licensure there by the reciprocity statute.

This particular resolution would not, to the best of my knowledge, change current practices in California.

VICE-SPEAKER BAILEY: Dr. Kahn, the Chair being a member of the Board of Medical Examiners, would call that a fair statement of the facts. Do you care to speak for or against this resolution?

DR. KAHN: Well, then, the resolution would not in effect change present practice?

VICE-SPEAKER BAILEY: In California it would not. We do not know about all the forty-eight states.

DR. KAHN: No, I really was somewhat concerned because I practiced in a hospital where each year two or three foreign born interns are trained. Some of them turn out to be excellent practitioners. Some of them find their way onto the faculties of the various medical schools in town here and others of them—certainly I can't conceive of how they would ever get by any Board of Medical Examiners. I am disinclined to put rocks in the way of those who are worthy just because they happen perhaps to come from a foreign medical school. There are many foreign medical schools which, considering their size, go for a higher proportion of Nobel Prize winners than some of our own schools. I hope that this resolution and the foregoing one will not put rocks in the way of those who are well trained and worthy.

VICE-SPEAKER BAILEY: Then the motion stands before the House on the adoption of this portion of the resolution. Any further debate? There is none.

All those in favor of adopting this portion of the resolution say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: The "ayes" have it and the motion is carried.

DR. HADLEY: Resolution No. 14, introduced by George K. Herzog, Jr., representing the San Francisco Medical Society.

The subject was left off the mimeographed report but it is on the clarification of the adoption laws. Your committee agrees with the purpose of this resolution and recommends it "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: That is on Resolution 16?

DR. HADLEY: 14.

VICE-SPEAKER BAILEY: 14, I beg your pardon. Is there any further discussion? Those in favor of the adoption will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Proceed, Doctor.

DR. HADLEY: Resolution No. 16, introduced by Grace M. Talbott, representing the San Francisco Medical Society. And again the subject of the resolution was left off the report but it had to do with the A.M.A. limiting the board training of certain hospitals and putting a minimum limit on the amount of time for board training in those hospitals.

Your committee agrees with this resolution and recommends it "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded the section be adopted. Is there any discussion? Those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: It is adopted.

DR. HADLEY: Resolution No. 18, introduced by Lewis T. Bullock, representing Los Angeles County Medical Association.

We agree in principle with this resolution but, for purposes of clarification, wish to submit the following amended resolution:

"Resolved, That this House of Delegates state its support of universal vaccination of dogs against rabies as a valuable measure for the protection of the public health; and be it further

"Resolved, That a bill to require vaccination of all dogs in California against rabies be prepared, introduced and supported in the Legislature by the representatives of the California Medical Association and further request the Council of the California Medical Association to ask the support and cooperation of other groups interested in the public health."

Mr. Speaker, we recommend that this amended resolution "Do Pass."

VICE-SPEAKER BAILEY: Moved and seconded that this resolution "Do Pass." Is there any discussion? Hearing none, all those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

A DELEGATE: Mr. Speaker, point of order. Where did Resolution No. 9 get lost?

VICE-SPEAKER BAILEY: I think it went to another committee. Will the Secretary find out where nine is?

DR. HADLEY: C.P.S. got it.

VICE-SPEAKER BAILEY: C.P.S. got it.

All right, Dr. Hadley, proceed.

DR. HADLEY: We are now on Resolution No. 20. This was introduced by the Santa Cruz Medical Society, represented by Luther Newhall.

This resolution concerns medical staff membership in non-profit hospitals. Your committee has changed the second "Whereas" by substituting the word "Trustees" for the word "management" and has changed the *Resolve* and wishes to offer this substitute resolution. In its amended form, the resolution reads as follows:

"WHEREAS, The public is entitled to efficient and harmonious operation of a non-profit hospital; and

"WHEREAS, The primary responsibility of the hospital trustees is to provide facilities and the primary responsibility of the medical staff is to provide medical care; and

"WHEREAS, Even though close cooperation and many overlapping functions are involved in the provision of good care to hospitalized persons, the separate underlying responsibilities provide a natural basis for a healthy balance of power; therefore, be it

"Resolved, That the California Medical Association go on record in favor of the proposition that the organizational structure of a duly constituted medical staff of a non-profit hospital should include items relevant to perpetuation of self government by the medical staff; and be it further

"Resolved, That this resolution be brought to the attention of hospital accrediting agencies for use by them as they review the organizational structure of non-profit hospitals in the State of California."

Your committee recommends that this amended resolution "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded that the amended resolution "Do Pass." Is there any discussion? Hearing none, all those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: This section is adopted.

DR. HADLEY: Resolution No. 21 is introduced by J. Needham Martin, representing the San Bernardino County Medical Society.

This resolution concerns the American Medical Association entertainment expenses.

Your committee agrees in principle with this resolution and recommends "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded. Is there any discussion? All those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: This section of the report is adopted.

DR. HADLEY: Resolution No. 22, introduced by Burt L. Davis, representing the Santa Clara County Medical Society.

Your committee agrees in principle with the resolution but would like to amend the first three paragraphs of the resolution, by adding the words "confusion and uncertainty" in the first two paragraphs and the phrase "in the interest of better administration of the program" in the third paragraph. These paragraphs would then read as follows:

"WHEREAS, There has been great dissatisfaction, confusion and uncertainty with the existing definition of a crippled child, as defined in the Crippled Children's Act; and

"WHEREAS, This dissatisfaction, confusion and uncertainty has not been confined to the medical profession, but also was emphasized by the Assembly Interim Committee on Public Health in its report of January 16, 1953 regarding the Crippled Children's Program in California; now, therefore, be it

"Resolved, That the Council of the California Medical Association and the appropriate committees be instructed by this House of Delegates to exercise their good judgment toward efforts to amend the existing definition to make it more satisfactory in the interest of better administration of the program; and be it further—"

The remainder of the resolution remains as mimeographed.

Your committee recommends that this amended resolution "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: It is moved and seconded this section of the report be adopted. Is there any discussion? There is discussion. Dr. Sirbu of San Francisco.

DR. SIRBU: Mr. Chairman, I hesitate to oppose this resolution because in principle I am in favor of it, but I would like to call to the attention of the House that on Sunday you passed a resolution which embodies the scope of the resolution now under consideration—in effect you asked for a legal definition of the crippled child and you instructed the Council to use other means to implement this definition and you also went into a number of phases of the Crippled Children's Service as it is administered.

Now by duplicating this you are, I believe, acting unfairly to an agency which in my opinion has made an honest effort during the past few years to seek and to abide by the guidance of the medical profession. I call to your attention the fact there is an Advisory Committee consisting of some twenty physicians in addition to four or five laymen interested in the crippled child that meets at regular intervals with the Crippled Children's Administration.

In the brief time that I have sat on the Advisory Board, my experience is that it is truly representative of this body. It is truly representative of organized medicine. It embodies at least a good portion of the Committee on Public Health that has sat and advised the Administration. Now to continually pass resolutions implying, or with the implication that the Crippled Children's Service is continually doing a bad job I think shows rather bad faith, and I would suggest that you vote this down as unnecessary and as serving no good purpose.

VICE-SPEAKER BAILEY: Thank you, Dr. Sirbu. Is there any further discussion? Dr. Burt Davis.

DR. DAVIS: I had not suspected that I would be called upon to speak to this question but I am happy to be here.

The resolution which you passed on Sunday covered a broad scope. There was much to be said in favor of including the definition as an amendment to that resolution and attempting to pass it at the same time. I did feel, however, and many of those with whom I discussed the matter, that it would be unwise to introduce as extensive a matter as a legal definition as merely an amendment to a resolution which was at that time on the table. And therefore the Reference Committee would have had probably that whole question of Crippled Children's activities referred to it.

So we decided that it would be much better to leave the existing resolution as it was and then to supplement that with a resolution which gives a suggestion for a definition.

Now, the definition of a Crippled Child in the present Code which is purely in the administration of it—it has not been defined by legislative action—the definition in the California Administrative Code, title 17, Section 2901 is that a physically handicapped child is a person under 21 years of age who has physical defects resulting from congenital anomalies or acquired through disease, accident or faulty development.

And then it goes on to say, "The following conditions are reportable:

"1. Defects of an orthopedic nature, due to infection, injury or congenital malformation.

"2. Defects requiring plastic reconstruction.

"3. Defects requiring orthodontic reconstruction.

"4. Eye conditions leading to loss of vision.

"5. Ear conditions leading to loss of hearing.

"6. Rheumatic or congenital heart disease.

"7. Other disabling or disfiguring deformities."

In other words, the definition merely says that the person who needs care must be under 21 years of age. There is no limitation because the last is all-inclusive.

Now, we felt that the way to approach this matter would be to suggest first that the Council work on a better definition, and as Dr. Carey challenged me the other day to work on a definition for it, naturally I had one prepared which was in this resolution, and this suggested merely that the definition might take this particular form.

The form of this resolution, if you will look at it carefully, goes on in its preamble much the same. There is no desire to utilize the funds which are to be used by the Crippled Children's Administration for cases where there are other funds available. There is no use in squandering the funds on one case where there is no reasonable assurance that there may be improvement in the child. There certainly is no need to squander the funds on conditions where the matter is really relatively trivial or where the disease or the impediment may be very safely and without any danger to the child be postponed until such time as he is earning his own living and able to take care of it himself.

So we felt that the new definition should be or could be that treatment may be afforded when there is reason to believe that such treatment may cure or arrest the condition and when financial hardship prevents adequate care through other than public means or where adequate care cannot be obtained through the usual channels.

It is the purpose of the act to provide assistance to the handicapped child who may be benefited by it, but the act is not to be interpreted in a manner which will dissipate these funds for purposes in which there is no reasonable assurance for the improvement, where other funds are available, when the condition is of a trivial nature and where care may safely be postponed until the time that the child may elect to have the treatment himself.

I don't see that we would in this way be hurting anyone's feelings. Obviously the Public Health Committee on Crippled Children's Services has not had a meeting since last Sunday. It merely means that this, for the files, supplements and assists the Council in its handling of the problem. I think that the two should be considered more or less by the Council as one request from the organization rather than that this is a separate resolution that needs further activity. It is all bound up in one problem, as you well know.

VICE-SPEAKER BAILEY: Dr. Davis, before you leave, the Chair must admit considerable surprise at discovering a few days ago that orthodontia and removal of tonsils are included in Crippled Children. Do your definitions include these?

DR. DAVIS: I think that in this resolution we say that things that are of a trivial nature need not be taken care of, and also we say that the care may be postponed until such time as the child may elect to have the treatment himself. There is adequate provi-

sion in this resolution or in this definition which will give force to the physician members of the Advisory Committee and give them something that they can work on. Certainly the definition as it now stands doesn't mean a thing.

VICE-SPEAKER BAILEY: Thank you, Dr. Davis. Is there further discussion? Then the adoption of this portion of the report stands before you. Those in favor will say "aye." Those opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: It is carried. Proceed.

DR. HADLEY: Resolution No. 23, introduced by Burt Davis, representing the Santa Clara Medical Society.

This resolution deals with hospital accreditation. Your committee agrees with the principle of this resolution and recommends "Do Pass."

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded that this section of the report be adopted. Is there discussion?

DR. DAVIS: Mr. Speaker.

VICE-SPEAKER BAILEY: Dr. Davis.

DR. DAVIS: I am speaking and taking up a little of your time at this point because the County Medical Society which I represent has instructed our delegation to do everything in its power to present to you one of the problems that we have in Santa Clara County. The resolution was entered because of the fact that we found that when we ran up against an unusual problem, one of the methods whereby this problem could be taken care of was to appeal to the Joint Accreditation Commission for its good offices in looking over the situation.

At that point we found that many doctors, most doctors—I say probably 90 per cent or more doctors—were not fully aware of the Joint Accreditation Commission and the excellent work that it has been doing. Our situation was this—we had in San Jose two community-type hospitals, both run under private auspices, both long revered and respected, having open staffs. Along about 1950 or thereabouts it was decided that funds should be raised for enlargement of one of these hospitals. These funds were obtained by public subscription on a strictly non-sectarian, non-partisan basis. There were members of all faiths represented. There were members of all strata of economic eligibility represented.

And it was at that time repeatedly assured to the County Society and to members of the hospital staff that the hospital would, and to the best of the power of the governing board of the hospital and the ownership of the hospital—the hospital would continue to run as an open staff hospital.

We have at least two letters to that effect which were sent to the staff and which were sent to the staff officers. These funds then were raised by giving the community a moral assurance that this was the type hospital that they were to have. Other funds

were obtained by Hill-Burton money. Other funds were obtained by borrowing from certain banks.

The hospital then was built and up until the middle of last summer no one had any inkling that there was going to be any other type of staff organization. There had been a committee that had been working for two or three years on the By-Laws and Constitution in an effort to set up a new set of By-Laws. These had been gone over several times with the governing board of the hospital and with the organization that owns the hospital. Various changes had been suggested but I don't think that it was any more prolonged or delayed than the labor pains that most Constitution and By-Laws revisions take, and probably in most of the hospitals in which we practice.

In any event, in October or a little before that the administrator of the hospital was changed. The new administrator saw fit to notify the staff that since they had been working for a couple of years without any fruition of their efforts, and since they had voted to repeal or to make new By-Laws that had constituted a repeal of their By-Laws, the interpretation was given by the hospital administrator that the staff was then not operating under any By-Laws.

Well, I don't know whether By-Laws are ever written in any other fashion but any By-Laws that I have ever seen always contain the provision that these will remain in effect until they are replaced by a new set, and certainly that was true in the case of the By-Laws under which this particular hospital was operating. The administrator of the hospital then summarily stated that since you are not operating under a set of By-Laws I have—and the governing board has prepared a set of By-Laws and the ownership of the hospital has prepared a set of By-Laws under which you will operate and I therefore am appointing certain doctors to certain staff appointments. I am appointing certain doctors to be the officers of the staff, the chief, the vice-chief, the secretary and so forth.

This certainly did not constitute a self-governing staff. The staff as it was appointed then from October through to December finally consisted of 26 doctors. Previously there had been in the neighborhood of 250 doctors on the staff. So 90 per cent of them were dispossessed so to speak and were left off as active staff members. Now many of the ones who were left off had been offered courtesy privileges, had been offered associate privileges and had been offered various subsidiary forms of staff membership which might be all right but certainly if a doctor was worth being on the staff certainly his advice should be available in meetings and he should be entitled to vote.

This group of 26 then was enlarged by the first of the year to somewhere in the neighborhood of 50, 51 or 52. And as I say, these men were arbitrarily appointed not by the staff but by the administration without any selection through staff committees, without any request for membership coming from a staff committee. They also were selected in a rather capricious way. There were only two surgeons. There were ten or some general practitioners. There

was only one orthopedist and certain broad areas of medical care were completely overlooked.

This staff then—or the old staff requested that the County Society act in their behalf and they held a meeting at the end of December at which seven or eight members spoke. These eight people were people who were included in the fifty appointed by the hospital administrator. These eight doctors spoke in very gentlemanly fashion and we have a tape recording for anyone who is interested in just exactly what they said, and within 48 hours each received a letter by registered mail, special delivery, which said in effect, "Since you saw fit to stand up and criticize our policies we interpret this that you are not interested in the hospital and in its organization and therefore you are not needed on the staff and you are not any longer a member of the staff."

Certainly this was a capricious and arbitrary method to inflict upon a staff where one should have self-government and responsibility from the doctors.

These doctors, some of them you don't know, you do know two of them, I know, personally as members of the House, Dr. Leon Fox, chairman of our delegation, past president of our society, Dr. Leslie Magoon. There were five past presidents of the County Medical Society in this group. They were men who were well known and whose integrity and ability is absolutely unquestioned.

Dr. R. Stanley Kneeshaw, past president of this organization, past president of our County Society, was not included in the first fifty. (Laughter.) He was the oldest living member of the staff, having been on the staff for thirty years, and he was completely overlooked. So that we felt that things were in a rather sad state of affairs when hospital administrators could dictate to the staff how they should run staff affairs, who they should have as their staff officers, who should be on the staff.

Incidentally, of the fifty there was one man who was put on the staff—I have no objection to him personally—I think he is a splendid doctor, but he had only been in the community something like a month and a half. He hadn't been in the community long enough for us to know him and get him into the County Medical Society but he was selected and Stan Kneeshaw was not.

Now, since January—I have cut an awful lot of detail out from here on. Since January a group of interested citizens representing all faiths and groups of labor organizations, various groups of doctors, all of these people have offered their good services to try and straighten out this problem. The hospital administration remains adamant and says that as far as they are concerned there is nothing to discuss, there is no problem, this is the staff. This is their hospital. This is what they wanted to do and that is what they are going to do, so that is all there is to it.

Therefore, we have prepared the resolution which is before you which points out that the Joint Accreditation Commission has been set up by various bodies and has been set up with the idea not only of improving certain specialty training in hospitals, but also the overall setup of the hospital whether they

have beetles in their flour bins and whether they have abnormalities in their governing boards' thinking, and this Joint Accreditation Commission when we wrote to them sent an inspector out. He went back and reported to the commission on the list which was put out in January, the new list did not include the name of the hospital in question. We felt that here medicine has an opportunity to curtail these abuses which we thought was a little local problem with some hard-headed and some stubborn people involved—and suddenly we found that we got letters from eight different state societies, one asking us for a thousand reprints of a newspaper article that we had prepared. They wanted a thousand reprints at their expense. We found that another state society wrote and said they wanted enough copies for all their committee chairmen to read.

We found numerous county societies all over the United States and we found numerous doctors, very influential ones too, people such as Evarts Graham, writing in and saying, "Now, you simply have an intolerable situation; we hope that you will keep up the fight."

The resolution is to point out that there is this new approved method of certification. We have found that it has been of great assistance to us. We have found that most doctors are not aware of its existence and we earnestly hope that the C.M.A. and the various county societies will spread the gospel so that other doctors who may be presented with the same situation will be offered the same amount of cooperation as we have gotten through the Joint Accreditation Commission. Thank you. (Applause.)

VICE-SPEAKER BAILEY: Thank you, Dr. Davis, for giving us an explanation of something that seemed pretty much unexplainable.

Now then, we will proceed to vote on the adoption of this section of the report unless there is further discussion. All those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: This section of the report is adopted. Proceed, Dr. Hadley.

DR. HADLEY: Resolution No. 25 introduced by William L. Bender, representing the San Francisco Medical Society.

We have amended the resolved portion and have added, after "American College of Physicians" the words "American Academy of General Practice."

In the accompanying letter we have added to the statements of principles item No. 8, which reads as follows:

"8. We suggest that members of the American College of Surgeons be charged with the responsibility of initiating action on a local level."

Your committee recommends that this resolution and the accompanying letter in its amended form "Do Pass."

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded that this portion of the report be adopted. Dr. Hodges, do you care to speak to the question?

DR. HODGES: I wish you would turn to your resolution, to the letter following it, and I wish to make an amendment.

VICE-SPEAKER BAILEY: This is page 7, the mid-portion—the last portion of page 7, is that correct, Dr. Hodges?

DR. HODGES: No, this will be on page 9.

VICE-SPEAKER BAILEY: Page 9.

DR. HODGES: If you will turn to the last paragraph of the letter, the third sentence, it reads at present as follows:

"We assure you of our wholehearted cooperation in carrying out any plans which you may institute."

Mr. Speaker, I move you that after the word "any" we insert the word "acceptable."

VICE-SPEAKER BAILEY: Dr. Hodges, wait a minute, let's just find that exactly, will you? What paragraph is that? Page 9, resolution No. 25.

DR. HODGES: That is the last paragraph of the letter.

VICE-SPEAKER BAILEY: Yes.

DR. HODGES: On page 9, and you will see that the third sentence reads as follows:

"We assure you of our wholehearted cooperation in carrying out any plans which you may institute."

I propose, sir, that we add the word "acceptable" after the word "any."

VICE-SPEAKER BAILEY: Thank you. I have it. Is there any further debate?

DR. DAVIS: Mr. Speaker.

VICE-SPEAKER BAILEY: Yes.

DR. DAVIS: I hope this is the last time I will be up here, this session at least. I find here that although I am totally in accord with the principles voiced by this letter that there are certain inaccuracies in it that make it unacceptable to me.

On page 8, if you will go back to the preceding page, the paragraph which is listed as No. 2 at about the middle of the page. The second sentence in that paragraph says "make hospitals responsible for misdeeds of staff physicians." That would put it right back to the spot I was just talking about a few minutes ago. I am sure that Dr. Bender intended to mean, make hospital staffs responsible for the misdeeds of staff physicians, because if you suggest that the Joint Accreditation Commission make the hospitals responsible the obvious thing is that the hospital is going to say, "All right, we will appoint five doctors and they will be the staff and we are not going to bother to have anybody else."

The whole letter contains some statements which are a little bit antagonistic, I think, and I should like to amend this resolution to the effect that the Council send—or the president of the society send an appropriate letter to these organizations which have been listed, but I think that the exact phraseology of

that letter should be left to the officer who writes it and signs it with the approval of the Council. That being an amendment, I would like to speak slightly to the point of saying I think that when we get to dotting the *i*'s and crossing the *t*'s and making the commas in a letter which is to go from one of our officers, if we have confidence enough in the man to raise him to that exalted position, I think we should have confidence enough in him that he will write the kind of letter that we expect him to write.

So, therefore, the exact verbiage should be left to the signator of the letter.

VICE-SPEAKER BAILEY: Now then, Dr. Davis, is that a motion to amend to refer the letter to the Council?

PRESIDENT GREEN: May we read that whole section two please, the whole thing? Dr. Davis has just read one part there.

VICE-SPEAKER BAILEY: Dr. Davis has moved to refer the entire letter to the Council, is that correct, for appropriate action? It is a three-page letter.

DR. DAVIS: Let us say that instead of having the resolution read, "Resolved, that the accompanying letter," say, "Resolved, that an appropriate letter," which develops the method by which this and that can be done, be written and sent by the President of the California Medical Association. In other words, the specific amendment would be to replace the words "the accompanying" by the words "an appropriate," and secondly to delete the letter which is mimeographed before you.

VICE-SPEAKER BAILEY: There is an amendment. Is there a second to that amendment?

... The amendment was variously seconded. ...

VICE-SPEAKER BAILEY: Seconded that an appropriate letter be sent and delete the letter. There is a second to the amendment. Is there any discussion on this particular problem, the amendment? All those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: So ordered.

Now, Dr. Green, do you expect to speak to your point?

PRESIDENT GREEN: It doesn't seem quite clear to me. In reading number two on page 8 I will read the whole thing:

"Notify accredited hospitals, and those who apply, that infraction of these rules will cancel your approval automatically. Make hospital staffs responsible for misdeeds of staff physicians, in fact of all professional personnel."

Does that mean that the medical staff is going to be critical of all professional personnel in a hospital? There are a lot of people in that hospital who are professional who are not doctors. That is the way it reads and the staff is going to be responsible for all professional people in the hospital.

DR. DAVIS: Point of order. That has been deleted.

VICE-SPEAKER BAILEY: That part has been deleted. Now, is there any further comment on this? Otherwise, we will pass Resolution 25 as amended.

DR. BENDER: Mr. Chairman.

VICE-SPEAKER BAILEY: Yes, Dr. Bender.

DR. BENDER: Mr. Speaker, members of the House: Since I am responsible for this I just want to say a few words about what led up to it. It was intended, number one, to spell out to the Board of Governors of the American College of Surgeons a way to curb the practices which they have condemned so loudly, and two, it was to put a brake on the periodic blasts that meet the public that do us no end of harm.

This letter was sent by the officers of the San Francisco Medical Society about last December, I think it was, shortly after the *Collier's* blast, and it received some favorable letters from the American College of Surgeons and officers of the American Hospital Association, both of which reprinted the letter in their official organs. I have no desire to try to pressure through something this way. I have no desire to intrude on any of the functions of the offices. I do think that a very strong letter should go from this organization along these lines in order to make the American College of Surgeons responsible to the rest of the medical profession for the things they say about us and what we do without offering any positive means of correction.

VICE-SPEAKER BAILEY: Thank you, Dr. Bender. We will then go back to the original resolution. Any further discussion on it as amended. There is none. All those in favor of the resolution say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Hadley, will you continue, please?

DR. HADLEY: Resolution No. 26, introduced by William L. Bender representing the San Francisco Medical Society. The title of this resolution was left off the mimeographed report again and it is on the Action Committee.

Your committee agrees that an Action Committee should be named by the Council and no matter how set up, whether within an established committee or autonomously, it should include one or more members from the Medical Services Commission.

Your committee recommends that this resolution "Do Pass."

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded that this portion of the report be adopted. Is there discussion?

Dr. Sherman, from San Francisco.

DR. SHERMAN: Mr. Speaker, members of the House of Delegates: In order not to dilute the functions of the activities of the Medical Services Commission or any other established committee which may be working along these lines, we feel that there should be an amendment placed to this particular

suggestion of Reference Committee No. 3. We believe the amendment should be as follows:

"Resolved, That the House of Delegates recommend that the Council of the C.M.A. set up this new Action Committee as defined in Resolution No. 26 as a separate committee."

Or if you want to use the word autonomous as acceptable, and also recommend that there be on this committee members of the Medical Services Commission and any other existing committees for purposes of continuity, guidance and advice.

VICE-SPEAKER BAILEY: Do you happen to have that written out? If you will turn that in to the Secretary—Do you have a copy of that there?

DR. SHERMAN: It is a very rough one. I will give you the rough one.

VICE-SPEAKER BAILEY: We have then the amendment proposed by Dr. Sherman. Dr. Hadley.

DR. HADLEY: May I speak?

VICE-SPEAKER BAILEY: Yes, you may.

DR. HADLEY: I do not believe this amendment would be necessary because in the first resolve it specifically states that an authority be created in an existing committee if practicable or in a special committee composed of seven individuals appointed by the Council, and of course responsible to the Council, et cetera.

VICE-SPEAKER BAILEY: And we have an amendment before the House. Is there a second to it? Dr. Sherman's amendment, is it seconded?

A MEMBER: Second.

VICE-SPEAKER BAILEY: There is a second. Any further discussion? Dr. Teall.

DR. TEALL: I simply ask that the amendment be defeated and I ask that because it seems to me that as recommended by the Reference Committee the matter is left to the Council for determination of who the actual committee shall be. In the near future you will hear more about the proposed program which the Council is attempting to implement in response to resolutions which you have already passed this afternoon. Dr. Sherman will, as you have heard a little earlier, be a member of that Council and will have every opportunity to make his suggestions at that time as to the autonomy of the Action Committee. I agree with the chairman of the Reference Committee that it is totally unnecessary for this House of Delegates to spell out the organization of that Action Committee and that it might properly be left in the responsibility of the Council which will be charged with other actions in this field.

I therefore urge you defeat the amendment.

VICE-SPEAKER BAILEY: Dr. Sherman, in view of this further information, do you care to have the motion put to the House?

DR. SHERMAN: Yes, sir.

VICE-SPEAKER BAILEY: You do? Any further discussion? All those in favor of the amendment will then say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was lost. ...

VICE-SPEAKER BAILEY: The amendment is defeated.

We then proceed back to the original resolution. Any further debate on the original resolution as amended? All those in favor it do pass say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: It is passed and adopted.

DR. HADLEY: Resolution No. 28, introduced by Howard C. Miles, representing Monterey County Medical Society.

This resolution deals with the illegal use of medical preparations. Your committee agrees with the principle of this resolution and recommends "Do Pass."

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: Moved and seconded that this portion of the report do pass. Is there any discussion on it? Dr. Gibbons.

DR. GIBBONS: Since this resolution deals with the matter of the Board of Medical Examiners, they might well be interested in it because if an unlicensed person prescribes medications, I think that it would be wise to amend the motion to have a copy of this resolution sent to the State Board of Medical Examiners, and I so move.

VICE-SPEAKER BAILEY: The amendment, then, Dr. Gibbons, is there a second?

A MEMBER: Second.

VICE-SPEAKER BAILEY: The amendment then reads:

"Resolved, That a copy of this be sent to the California State Board of Pharmacy and the California State Board of Medical Examiners."

Any discussion? Those in favor of the amendment will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: The amendment is carried. Now the original motion as amended. All those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Carried, and so ordered. Dr. Hadley.

DR. HADLEY: I may add that Dr. Gibbons is a member of the California State Board of Examiners. He can take his copy home with him. (Laughter.)

Resolution No. 29, introduced by Howard C. Miles, representing Monterey County Medical Society. The title of this resolution was left off the mimeographed copy; it is on the restricted licensure of nonmedical groups.

Your committee has made an addition to the first sentence of the resolved portion, reading as follows:

"Resolved, In the interest of public health and welfare, the House of Delegates ..."

With this addition, your committee recommends "Do Pass" in the amended form.

Mr. Speaker, I move the adoption of this section of the report.

VICE-SPEAKER BAILEY: Moved and seconded this section of the report be adopted. Is there any discussion? There being no discussion, those in favor will say "aye." Those opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: It is carried and so ordered.

DR. HADLEY: Resolution No. 30, introduced by Roderick A. Ogden, representing the Kern County Medical Society.

This resolution deals with a student loan fund. We have found it necessary to rewrite this resolution as follows:

"WHEREAS, The American Medical Association and the California Medical Association have expended considerable effort to establish favorable public relations between medical students and organized medicine; and

"WHEREAS, The cost of medical education, in tuition, fees and subsistence, has increased to such a degree that a number of medical students who offer promise of being excellent physicians are either denied that opportunity or greatly hindered in its fulfillment; and

"WHEREAS, Concrete evidence of the interest of organized medicine in the problems of medical students, particularly in the rendering of financial aid, would undoubtedly be a very strong factor in establishing good relations between students in training and organized medicine, and would also allow some students, who in later years would reflect credit and honor on medicine, to complete their education; therefore, be it

"Resolved, That the Council of the California Medical Association investigate, or appoint a committee to investigate, the possibility of establishing a Loan Fund."

Your committee recommends that this amended resolution "Do Pass."

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded that this portion of the report be adopted. Is there a discussion? Dr. Farthing.

DR. FARTHING (San Mateo County): I am in full accord with the resolution as amended by the committee but I believe that its usefulness can be further enhanced and I would therefore like to submit the following amendment. I would like to add a few whereases. So therefore at the bottom of the last whereas in the amended portion of the resolution I would like to have the wording changed so as to omit "Therefore be it" and start off, "And, also,

"WHEREAS, It is well known that many young doctors with excellent training and ability are discouraged from entering private practice of medicine

by debts, financial obligation of starting an office and maintaining a home; and

"WHEREAS, This financial insecurity lends itself to the easy exploitation of this group by certain organizations which may offer"—(laughter)—"an enticing and seemingly adequate fixed salary; and

"WHEREAS, Such organizations by their exploitation tend to captivate this highly trained young medical talent in localized areas, thus depriving the people in many areas of the services of such highly trained doctors; and

"WHEREAS, Such financial insecurity and exploitation tends to frustrate the ultimate ambitions and aims of the young physicians to enter the private practice of medicine in a community of their choice; now, therefore, be it

"Resolved—"

And I would like to change the resolved portion of the amended resolution:

"Resolved, That the Council of the California Medical Association proceed without delay to the establishment of a Loan Fund, the purposes of which shall be:

"1. To aid needy and worthy medical students duly accepted for registration in Class A California medical schools,

"2. To aid recently graduated doctors of Class A California medical schools in the establishment of their own private practice; and be it further

"Resolved, That inasmuch as young doctors are unusually good credit risks, this fund be administered very liberally as to time and interest."

VICE-SPEAKER BAILEY: Thank you, Dr. Farthing. May we have that amendment? You are not going to amend on frustration, I guess. (Laughter.) Is there any second to Dr. Farthing's amendment?

... The amendment was variously seconded. ...

VICE-SPEAKER BAILEY: There is a second. Dr. Lum.

DR. LUM: Mr. Speaker, I think that this should be recognized as an expression of opinion of Dr. Farthing. I doubt whether the adoption of his amendment is necessary. I am quite sure that the Council would take cognizance of his remarks.

VICE-SPEAKER BAILEY: Thank you, Dr. Lum. Dr. Ogden, Kern County.

DR. OGDEN: As one of the alternates of this resolution we spent a certain amount of time working this up. We considered at first making it highly specific as to the loans, the type of loans, how long they would be in effect and who would get them. As we worked more and more on it we kept deleting things. We considered at first including the young doctor starting in practice. We considered particularly the problem of financing the resident in training and the intern in training, and we finally decided that if we could get this started, if we can get a committee appointed by the Council that it would be up to the Council and the committee from then

on to decide the extent and the administration of this fund.

VICE-SPEAKER BAILEY: Thank you very much, Dr. Ogden. Is there further discussion on the amendment? The vote is now on the amendment as to whether we shall add Dr. Farthing's portion of the report. All those in favor will say "aye." All those opposed?

... There being no further discussion, the motion was put to a vote and it was lost. ...

VICE-SPEAKER BAILEY: The "noes" have it. The amendment is lost but that still doesn't mean, Dr. Farthing, that we aren't all heartily in favor of it. (Laughter.) That isn't prejudiced. In other words, we don't want to tie the hands of the Council.

Now, to get back to the original resolution, No. 30, any further discussion on it? There being no further discussion, all those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Passed and so ordered. Now, Dr. Hadley.

DR. HADLEY: I wish again to thank Drs. Weyrauch and Randall for their splendid cooperation in preparing this report, and I would also like to thank Mr. Gillette and Mr. Hap Hassard for their help.

Mr. Speaker, I move the adoption of this amended report as a whole.

VICE-SPEAKER BAILEY: It has been moved the amended report as a whole be adopted. Is there any discussion? All those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: The report is adopted, and may I take this opportunity to offer thanks to Dr. Carl M. Hadley of San Bernardino, Dr. Helen Weyrauch of San Francisco and Dr. Samuel Randall of Santa Cruz for long arduous labor and a very excellent report. (Applause.)

...The Chair was assumed by Speaker Charnock....

SPEAKER CHARNOCK: The next order of business naturally will be the report of Reference Committee No. 4. No business was sent to Reference Committee No. 4, so they were put in conjunction with C.P.S. Reference Committee, and you will now hear from the chairman of the C.P.S. Reference Committee. Dr. Paul Foster of Los Angeles.

REPORT OF C.P.S. REFERENCE COMMITTEE

DR. PAUL FOSTER: Your C.P.S. Reference Committee, consisting of myself, Dr. Dan Kilroy and Dr. Fred Olson, has been fortunate to have the services of Reference Committee No. 4, consisting of Drs. Thomas LeValley, Dr. Dorothy Allen and James E. Feldmayer.

The first item referred to your committee was the report of Dr. Francis T. Hodges, president of the

C.P.S. Board of Trustees, who on Sunday reported the progress of California Physicians' Service to the House of Delegates.

The committee feels that it was an excellent report.

On the whole, Dr. Hodges' statement reflected optimism among the trustees and the administration regarding the present and future effectiveness of C.P.S. as the medical profession's instrument to make health insurance work better for more people.

Encouraging progress was reported on new contracts, new membership, financial condition, professional and public relations, administrative efficiency, the development of indemnity type insurance.

We can all share in the feeling of satisfaction over C.P.S.'s heartening achievements on these many fronts. But the committee feels that we should not bask in our own satisfaction so long that we fall asleep to the danger signals contained in Dr. Hodge's report.

We refer to the section regarding C.P.S. income ceiling and closed panel competition.

While making it clear that the income ceiling decision is one for the profession and not for C.P.S., Dr. Hodges' report also makes it abundantly clear that C.P.S. is selling—and will sell in the future—few significant groups while the income ceiling remains at \$4,200.

Dr. Hodges also states, and we quote:

"Where doctors have been active in the solicitation of any large group in competition with closed panel plans without an income ceiling, they have been continuously reminded by group leaders that the income ceiling must be raised to \$6,000 or eliminated. In San Pedro the income ceiling was eliminated, and for students in the new branch of the University of California at Riverside, in order that the groups involved might have the benefit of the services of doctors in the private practice of medicine."

This committee feels that what Dr. Hodges has reported—as well as what we have heard from countless sources during our consideration of the various C.P.S. resolutions—adds up to two things:

1. An increase in the C.P.S. income ceiling (as proposed by the C.M.A. Council in Resolution No. 5) on a local option basis, is imperative, if C.P.S. is to remain an effective, competitive instrument of the medical profession in the field of prepaid health insurance.

2. A high degree of unity is essential within the medical profession in supporting California Physicians' Service.

California Physicians' Service is a successful, going concern. It is painstakingly building public confidence and support for its services and the profession operating it. The success of its future activities depends, however, to a large extent on the policies we tell it to follow and the degree of support and unity we give those policies.

Mr. Speaker, I move the acceptance of this portion of the report.

SPEAKER CHARNOCK: This portion of the report has been moved and seconded. Is there any discussion?

DR. BATZLE: Mr. Chairman.

SPEAKER CHARNOCK: Doctor.

DR. BATZLE: I am Dr. Batzle from Riverside County. In the large letters is a report that there is no income ceiling in the Riverside contract with the University. I feel that that implies that the doctors of Riverside County feel that there should be no income ceiling. I would like to make it clear to this House that that happened inadvertently. It was a matter we had overlooked, and also we overlooked it for the simple reason that we did not think any student in the University would come under that income ceiling. Thank you.

SPEAKER CHARNOCK: Thank you, Dr. Batzle.

Will you proceed, Dr. Foster? Is there any other discussion on this section of the report? Those who are in favor of this section of the report will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: It is accepted.

DR. FOSTER: Resolution No. 5. You have it before you so I won't reread it. Your Reference Committee is fully cognizant of the growing public need for greater certainty of coverage for the cost of doctors' services. Many years of study have gone into this complex problem, and many methods of meeting the public need have been suggested. Apparently there is only one proven and immediately available vehicle to meet the needs of the various areas in these rapidly changing times—C.P.S. with a raised income ceiling. We are in accord with the action of Reference Committee No. 3 in recommending the long-range solution proposed by the Medical Services Commission.

Physicians have already established a number of plans of subscriber groups meeting the needs in their community and guaranteeing freedom of choice of physicians for the providing of methods of payment of the costs for medical, surgical and hospital care.

Inasmuch as a substantial increase in the number of local programs beyond those already adopted would greatly complicate the situation, therefore unified action is desired.

Your committee underlines the importance of doctors in neighboring areas respecting the agreements of those counties adopting this permissive plan to meet local conditions. The medical profession cannot be placed in a position of selling a plan that will not be accepted in the outlying districts, where the public may feel they are being discriminated against or losing out because of buying that particular plan.

Your committee feels that due to the trends of the times, it is desirable to make it possible for local areas to adopt an income ceiling of \$6,000.

Raising the income ceiling to \$6,000 in those areas where it has been requested will make possible the enrollment of state-wide and nation-wide groups.

Due to the lack of uniformity of benefits, it is difficult to enroll large groups of employees where only a portion qualify below the ceiling.

The committee was impressed by the concrete evidence of the profession's ability and its willingness to take the initiative in meeting current needs and trends for certainty of coverage, and the freedom of the patient to choose his own personal physician.

There is no single solution to the problem. The free enterprise system will guarantee that competing kinds of medical care insurance will continue to operate.

Your committee emphasizes the fact that this is a permissive resolution, and that its adoption will not result in a state-wide raise in the income ceiling. The higher income ceiling will become effective only in those societies where a majority of the members desire it and vote for it.

Your committee was just informed that Dr. Francis J. Cox's subcommittee of the Medical Services Commission has reported suggested changes in the fee schedule based on the \$6,000 income ceiling to the Council of California Medical Association. The Council has approved the suggested changes.

Your committee recommends that Resolution No. 5 "Do Pass."

Mr. Speaker, I move the acceptance of this section of the report.

SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be accepted. Is there any discussion? All those in favor of the section—

Dr. Sirbu of San Francisco.

DR. SIRBU: Mr. Speaker, members of the House: It is a little surprising to me that an item of such importance and such widespread discussion should call for such delayed action by anyone discussing this. It may be that further discussion will come out later when other resolutions are discussed. But in effect, if we take this action we are going to establish a principle that I think is going to affect the practice of medicine in California from here on. Now, earlier this afternoon this House passed unanimously Resolution No. 3 which reads to the effect:

"Resolved, That the California Medical Association proceed with vigor in the study, development and implementation of the Usual Fee Indemnity Plan."

That action was taken presumably because the majority of the delegates here in assembly agreed with the report submitted by the Medical Services Commission and agree in general with the Waterson report on which much of it was based. It is our feeling in the San Francisco delegation, and I think I speak for the vast majority present, that you can't develop two of these plans immediately and implement them both. There is sufficient evidence that if you are really talking about local option we should know what we are talking about.

In San Francisco, and I am sure there are other counties that feel the same way, if we desire on a local option basis to raise the ceiling to \$6,000, and

there is strong sentiment in our county to do that, we also feel that we should have the local option to determine what fees our members should operate under on the \$6,000 level. It has been amply stated that when you raise the level to \$6,000 you will then take in sufficient numbers so that you will have between 87 and 90 per cent of the people who are seeking this type of insurance. When you do that, of course, you are setting a pattern for the practice of medicine in the community in which you are residing and practicing.

A little later on a plan will be suggested whereby we think true local option will be implemented. We feel that the local option submitted here will have severe implications in those communities where the cost of living and the cost of operations will militate against accepting the type of fee schedule that C.P.S. can write on a service plan on a state-wide basis.

We recognize the fact that it would be terrifically difficult to write any type of insurance on a state-wide basis dealing with 15, 20 or 25 fee schedules. On the other hand we submit that those of us living and practicing in an urban area would find it impossible to continue operations on a fee schedule that suits the entire state when you raise the ceiling to include up to 90 per cent of your practice.

We recognize, all of us, that when we undertook to support C.P.S. we were offering something to the low income level group. Those of us in urban communities where the cost of operation is high were willing to continue on that basis, but we felt that those that were able to pay the private fee should be willing after prior discussion to pay the difference between that low level fee and the usual fee that that doctor charges. That principle, I think, should be perpetuated because if you abolish that principle leaving some 10 per cent of the population only uncovered, then you have set a pattern which you will have difficulty operating under.

I can point out that we have been under negotiation with union leaders and with insurance carriers for a considerable length of time. We have established in San Francisco a set of fees which we think is applicable. It is under continual revision and we are meeting the threat of closed panels under this type of revision. But if you set the pattern on a state-wide basis, why then you are going to tie our hands in negotiation with others. We can't give one deal to C.P.S. and another deal to Blue Cross or an indemnity insurance carrier.

In our area some 75 per cent of the union labor contracts are still being written by indemnity carriers and solving the problem of this group to a great extent notwithstanding the fact there have been some inroads. When these contracts come up for negotiation again we will have a voice in it as we have when C.P.S. and another carrier deal for the indemnity group. Therefore, by this publicity and this action you are setting the pattern not only for C.P.S. contract but for any other insurance carrier contract, and that, may I submit, is not true local option because our hands will be tied by the overwhelming reaction to this on a public relations basis.

It is our opinion that, and I am leading up to what will come on following me, that on a service basis you can't go beyond a \$4,200 limit. The minute you do that you are running into all of the implications I mentioned. If you are going to cover, and we want to cover those up to \$6,000 and perhaps more, then it must be on an indemnity basis which brings us back to the issue at stake, do we want a service or do we want an indemnity proposition for those beyond the semi-indigent or the low income group? Therefore, Mr. Chairman, I would take this opportunity to urge this House to vote down Proposition No. 5 at the present time. (Applause.)

SPEAKER CHARNOCK: Dr. Sherman, San Francisco.

DR. SHERMAN: Mr. Speaker and Fellow Delegates: The San Francisco delegation has requested me as its president to impart to you its views as to a substitute resolution for this Resolution No. 5, based purely on their own convictions that the adoption and implementation of the Usual-Fee Indemnity Plan would be much more to the benefit of the physicians of California and the patients covered under these plans than the plan proposed in Resolution No. 5. Therefore, I submit to you this substitute resolution which reads as follows:

"Resolved, That this House of Delegates recommend the adoption of the \$6,000 annual income ceiling for C.P.S. contracts based on the formulation of the Usual-Fee—"

That is hyphenated, "Usual-Fee Indemnity Plan," as recommended by the Medical Services Commission and as already approved by you as delegates today in Resolution No. 3 which came from Reference Committee No. 3, and that is for immediate implementation on local levels under local option whenever so desired.

SPEAKER CHARNOCK: Is there a second to that amendment?

A MEMBER: Second the amendment.

SPEAKER CHARNOCK: It has been moved and seconded that we amend this passage of the report by substitution of this amendment. Is there any discussion to this amendment?

DR. SHERMAN: Mr. Chairman, may I also state that this is only a substitute for Part 1 of Resolution No. 5, that we leave in Sections 2 and 3 as unamended.

SPEAKER CHARNOCK: This resolution is a substitute amendment for Part 1, Dr. Sherman. Part 1?

DR. SHERMAN: That is correct, sir.

DR. HARRINGTON (San Francisco): I should like to speak in favor of this substitute motion or resolution. You have all heard the report and read the report of the Medical Services Commission which is based on a careful and continued study over a long period of time of a very complex problem. They want and recommend the Usual-Fee Indemnity Plan and this delegation has gone on record as favoring indemnity plans of health insurance by creating a corporation within C.P.S. for the purpose of imple-

menting such plan. This is a no-holds-barred fight with closed panel capitation plans in this country and it is my considered opinion that the private practice of medicine with a free choice of doctor and of insurance plan by the patient cannot compete in an economic sense with such plans.

Only indemnity plans which can be made actuarially sound can compete with such a closed panel group and still maintain the standards of medical care to which the public has become accustomed and to which it is entitled.

A service plan adopted by this delegation which binds the component county societies as does this original motion, not the substitute, is unfair to the individual doctor and to the local societies in that it gives them no real self-determination in the matter of medical economics. The adoption of the Usual-Fee Indemnity Plan as developed by the Medical Services Commission would solve this problem of local option in a very simple manner and would leave each individual doctor and each county society completely free to solve its own economic problem as he or it saw fit.

We must be the masters of our own destiny. When we engage in competitive practices with closed panel capitation plans by hastily conceived and clumsily executed service plans we begin the process of undermining the standards of care in medicine to which we are dedicated, and what is worse, we cut the standards in medicine for those who will follow us.

It has been argued that social trends will dictate our policies and our standards in any case, and that we should bow with the hurricane. With this philosophy I disagree and I urge you not to accept it.

If we must go down, if we must inevitably accept the lower standards of medical care which will inevitably result with competition from closed capitation plans of medical service, let us at least do so with our heads erect and not in the process of cringing hysteria. (Applause.)

SPEAKER CHARNOCK: Dr. Teall, you wish the floor? You are speaking to the amendment?

DR. TEALL: Yes, sir.

SPEAKER CHARNOCK: Correct.

DR. TEALL: I apologize for taking up the amendment, sir, but I didn't understand it when it was read and I wanted an opportunity to read it, and I confess reluctantly that having read it five times I still don't quite know its import. I want to thank Dr. Sherman and Dr. Harrington for the very able exposition of the underlying philosophy of the Usual-Fee Indemnity approach to the problems at hand. There has been some question in the past few days as to my own personal attitude about this introduced resolution. I would like to clarify that at this moment by saying that I wrote it. I presented it to the Medical Services Commission and recommended its adoption there which was done.

I then presented it to the Council and recommended its adoption there, which was done. And I take the further step in recommending its adoption by the House of Delegates here. I would like to

clarify why its adoption is recommended and what it accomplishes.

It is probably totally unnecessary because nearly all of the things which are embraced in this resolution, No. 5, have already been approved by the House of Delegates and in certain parts of the state are in existence. There is already in one sizable branch of one of our county medical societies a plan in operation underwritten by California Physicians' Service in which there is no income ceiling and in which that point is widely advertised to the public.

The fee schedule existing under that plan is the existing fee schedule that applies on the rest of the state in its service operations. This simply says that wherever a county feels the need to have such types of service coverage, wherever any county group desires this approach to its problem, they have the privilege of requesting it and C.P.S. is asked to provide it for them and in order to make good that coverage for individuals who live within that county or who may seek medical care elsewhere, the physician members of C.P.S. are asked to waive the service ceiling up to \$6,000 for individuals who do hold that contract.

This is all that is provided, and may I point out again as was pointed out by Dr. Foster, that this is not a recommendation, an urging, a desire, a forcing, or any other such compulsive term that any county society request or adopt a \$6,000 income ceiling under its C.P.S. service operations.

We tend to become confused. C.P.S. is offering both service and indemnity. We are not in any sense attempting to limit C.P.S.'s indemnity operations and I think we must be careful in the future to make it very clear that we are talking only about the service operations which are the only operations in my mind which require an income ceiling. For this reason I am not able to understand clearly the resolution introduced as an amendment by Dr. Sherman which I will read again for you:

"That this House of Delegates recommend the adoption of a \$6,000 annual income ceiling for C.P.S. contracts based on the formulation of the Usual-Fee Indemnity Plan as recommended by the Medical Services Commission and for immediate implementation."

An indemnity plan is not built on a service ceiling. A service contract requires a ceiling if we are going to limit it at all. An indemnity plan envisions that there will be no ceiling.

Now, any county society group, as Dr. Sherman and as Dr. Harrington have pointed out to us, is completely at liberty to agree with any beneficiary group that its members will abide by any level of indemnity which they decide to be a fee schedule appropriate to that community, and this is the basis as I understand it on which San Francisco has been progressing to this moment. I do not see the necessity of an income ceiling established on a state-wide basis in C.P.S. contracts wherein on an indemnity basis based on the Usual-Fee Indemnity Plan because I am unable to see the compatibility of these two posi-

tions, I recommend to you the defeat of the amendment as proposed. (Applause.)

SPEAKER CHARNOCK: You have heard the discussion directed to the amendment. Are you ready to vote upon the amendment.

A MEMBER: Question.

SPEAKER CHARNOCK: Those who are in favor of the amendment will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote. ...

SPEAKER CHARNOCK: The Chair is in doubt. Those who are in favor of the amendment will please stand.

... There was a standing vote. ...

SPEAKER CHARNOCK: Will you be seated, gentlemen? Those who are opposed to this amendment please stand.

... There was a standing vote. ...

SPEAKER CHARNOCK: Will you be seated, gentlemen? The amendment has lost.

Is there any more discussion upon Resolution No. 5?

DR. BULLOCK: Mr. Chairman.

SPEAKER CHARNOCK: Dr. Bullock.

DR. BULLOCK: Gentlemen, I would like to call to your attention a section which was previously adopted at the top of page 2 which says: "A high degree of unity is essential within the medical profession in supporting California Physicians' Service."

I would also like to call your attention to a meeting which occurred in Yosemite at which an important group within this organization voted as to whether they would resign from C.P.S. in a body. The universal opinion, I believe, in that group was that they were being discriminated against. They were not receiving fair play, C.P.S. was not being conducted in a way which would provide the beneficiary with a maximum and the best type of medical service, and that they were getting a little bit unhappy about it.

Now I was one of those that did not vote for separation and I am still a member of C.P.S. and I am still a member purely and only because I feel that I always want to do my part for the support of the organized approach to the problems. I do it, however, at a very great loss to myself, and I think that this body is going to have to recognize when it starts increasing the ceiling the fact that there is a major and an important group known as practitioners of internal medicine which cannot survive, which will not survive in my opinion under the present way in which C.P.S. is conducted.

The reason for the unhappiness of this group is very simple. We practice in a certain way. We work on the thesis that we spend a long time with each of our patients. We go into extreme detail in taking a history and doing a physical and making a diagnosis, and we find that when we know what is wrong with the patient their efforts—therapeutic efforts—require relatively little time.

We do not go in for repeated injections or treatments. We see our patients very infrequently normally, a patient comes in and spends a full hour at least, comes back for another half hour, considerable amount of laboratory work is done. The cost for that is there, of course, and the patient is then presented with a complete, thorough, exhaustive diagnostic study representing the type of medicine which we should be proud of, is then told, "Oh, no, the services of internists in practicing this way are not covered under C.P.S."

All right then, that patient with, say, hypertension comes back again in two months or three months. That history is thoroughly and exhaustively reviewed, another complete and thorough detailed examination is done, a full thirty minutes is spent with the patient. The therapy is reviewed, it is re-prescribed, it is gone over in great detail. All the problems are covered. Once in two months is usually adequate. He might be seen again, say, in two months and then in about eight or ten months he develops congestive failure from his hypertension.

He then comes in, is admitted to the hospital, receives exhaustive study, exhaustive treatment and runs up a considerable bill. At that time he is told, "Oh, it is too bad, I am sorry the first cost you some money and you were not covered. You had no visits, six months is all you have and so your treatment from there on for the rest of your life, which is part of the disease for which you were trying to get insurance, is now inoperative and no good."

Basically, C.P.S. does not try to cover the problems that the internists face. Basically it pays him for that second visit, somewhere around \$3.00 for an hour, full half hour for him and his entire staff. That means basically he and his staff, there are two girls working for \$6.00 an hour, assuming that you divide that equally it means that each, he and his staff and his nurses are getting approximately \$2.00 an hour and that is what C.P.S. seems to think an internist is worth and the internist keeps on doing it.

As a representative of one of those who is still stuck behind it despite a very great loss, I am not going to continue with the increase of this fee schedule to—I mean the limit to \$6,000. It is not possible. If this House wants the internists in it, it is going to have to take cognizance of the fact that internists practice a very certain and special way, that they do what we think is the highest and the best type of medicine. We think that if by appealing to the internists, by finding a place for them, we will provide better medical care for this group of people.

In the army, in every other part of the practice of medicine, the services of the internists are fully and completely recognized. It is universally thought that they provide a part of medicine which is a benefit and a value except in C.P.S. I assure you that I will lead a very definite effort among the internists to resign from C.P.S. in a group if this goes up and if some relief for the internists is not received.

I therefore move you an amendment to this to read as follows, after number 3:

"WHEREAS, The present fee schedule does not adequately cover the type of service characteristic of the practice of internal medicine, that beneficiaries either be advised that services of internists are not included under C.P.S. or that the directors of C.P.S. be instructed to immediately develop a method of covering the services of internists for beneficiaries of C.P.S."

SPEAKER CHARNOCK: Dr. Bullock, you are submitting that as an amendment to section 4?

DR. BULLOCK: It would go in as number 4.

SPEAKER CHARNOCK: You are not amending any of the three sections.

A MEMBER: Second.

SPEAKER CHARNOCK: That amendment has been seconded. It is now open for discussion. Dr. Foster.

DR. FOSTER: I think it is generally recognized that the internists and other medical specialties are not adequately covered in C.P.S. We got the Medical Director of C.P.S. into our hearing and asked him about internal medicine and medical specialists and they have promised that they will take nine major illnesses and try it out on a total sum basis for a period of three months to see how it works out. They realize the inadequacies of the medical specialties and medical portion of the program. I think it is only right that we give them an opportunity to try to carry this out.

SPEAKER CHARNOCK: Is there any more discussion to the amendment?

DR. LUM: Mr. Chairman, members of the House of Delegates: I would like to say that the Council this morning passed a resolution requesting the C.P.S. Trustees to carry out the line of endeavor as outlined by Dr. Foster.

SPEAKER CHARNOCK: Dr. Shipman would like to speak to this amendment.

DR. SHIPMAN: I thought you might be interested in the resolution which the Council passed which Dr. Lum referred to. It reads as follows:

"That the Council request that a drafting of fee schedule to be used in conjunction with the proposed \$6,000 C.P.S. income ceiling consideration be given to the provision of reasonable fees for medical treatment of major illness subject to deductible features of C.P.S. contracts and to preventive use, also subject to request for medical reports and selected cases which may be referred to County Medical Society C.P.S. Liaison Committees for review and recommendation."

SPEAKER CHARNOCK: Thanks, Dr. Shipman. Is there any further discussion to the amendment? Are you ready for the question upon the amendment, Doctor?

DR. TEALL: May we have a rereading of the amendment, please?

SPEAKER CHARNOCK: Dr. Bullock, will you restate the amendment?

DR. BULLOCK: I am most pleased to hear that the Council and the other members who have spoken

have recognized the need for this amendment and action. I think, however, the specific statement on the matter by the House of Delegates is most important. If we want unity we must include all groups of the profession in this, and there is very limited room for changes. In other words, to give the internists reasonable recognition and provide their services for the beneficiaries. It is moved that whereas the present fee schedule of C.P.S. does not adequately cover the type of service characteristic of the practice of internal medicine that beneficiaries either be advised that the services of internists are not included under their contract or that the directors of C.P.S. be instructed to immediately develop a method for covering the services of internists for beneficiaries of C.P.S.

SPEAKER CHARNOCK: Thank you, Dr. Bullock. Dr. Teall, are you discussing this matter?

DR. TEALL: Yes, sir. I have absolutely no quarrel with the principles involved or the amendment suggested. I would only like to suggest that it is not a proper amendment to the particular resolution under discussion at this moment.

If you will glance ahead in your C.P.S. Reference Committee report you will find on page 5 Resolution No. 13 which concerns exactly this problem and which I submit is the proper place for this amendment to be discussed and inserted. Dr. Foster will discuss that at that point and I would suggest that the amendment be withdrawn for this particular resolution and reintroduced when we consider the internal medical fees.

SPEAKER CHARNOCK: Dr. Bullock.

DR. BULLOCK: Mr. Speaker, this is most appropriate here because with this introduction the internists in the room are liable to go along with unity. If we are going to have the increase of the ceiling to this level to include the great majority of our practice of internists in the room I think we are going to vote against it. I certainly am. With this amendment we will vote for it. Therefore, I think it is appropriate to make a decision before we go up to \$6,000. Is a further internal medicine aid going to be included in C.P.S. or not, or if the fact that it is not in be clearly recognized by all concerned at the present time.

DR. TEALL: I would like to make one additional comment that I failed to make. It is perfectly obvious that Dr. Bullock will vote against any attempt of his branch society to request a \$6,000 option within its own level. This is his privilege and it is the privilege of any internist who feels that the \$6,000 ceiling should not be adopted, and I hope that everyone else will look very critically at whether it should be adopted with the provisions available. However, I still feel that this amendment does not belong in this section of the resolution and request that you defeat it at this time.

SPEAKER CHARNOCK: Is there any further discussion to the amendment? Section 4 of this resolution?

A MEMBER: Question.

SPEAKER CHARNOCK: The question has been called for. Those in favor of Dr. Bullock's amendment which will become Section 4 if passed, will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote. ...

SPEAKER CHARNOCK: The Chair is again in doubt. Those who are in favor of Dr. Bullock's amendment will please stand.

... There was a standing vote. ...

SPEAKER CHARNOCK: Those opposed to this amendment please stand.

... There was a standing vote. ...

SPEAKER CHARNOCK: It carries by 105 to 82.

We will proceed, please, with this resolution as amended. Doctor?

DR. MOORE (San Diego): I am discussing the resolution.

SPEAKER CHARNOCK: All right.

DR. MOORE: Mr. Speaker, Members: I would like to discuss part 3 of the resolution, No. 5, stating that physician members of C.P.S. in a county which has not requested the higher ceiling, abide by the income ceiling for beneficiaries who have secured this coverage in some other county society area.

Now my understanding is that C.P.S. is primarily engaged in the sale of group policies. The policy is sold to groups, and only a small percentage of individual policies have been issued. Under ordinary circumstances the only way in which this particular condition could occur is when an individual leaves a group where he is employed and moves to another part of the state. In such event he is issued a special contingent contract. His group contract no longer exists. He is issued a special individual contract at a higher rate.

Now I can picture that individual no longer with the group given a special contract, going to another county, coming into my office and demanding that I treat him under a \$6,000 ceiling income where in our particular county we do not do that and I can picture each of those patients doing that and making the doctor mad. I don't think we want to make the doctor mad. So I would like to move that Paragraph 3 of Resolution No. 5 be deleted.

SPEAKER CHARNOCK: You are moving to amend by deletion? Is there a second to that? The Chair has heard no second.

A MEMBER: Second.

SPEAKER CHARNOCK: It has been seconded. Is there any discussion on deleting Section 3? Yes, Dr. Miles.

DR. MILES (Monterey County): I think that the doctor is being a little rash in presuming that a patient would have to leave one area and leave his job in order to move to an area where he would be asking the aid of a physician in another county. I think that it is particularly evident in California that you can live in San Mateo County and work in San Francisco and that your contract would be issued in San Francisco or that you could live in

Berkeley or Oakland and your work be in San Francisco but your physician would be in the other county, so I would ask you to consider again before you pass that amendment because of this.

SPEAKER CHARNOCK: Is there any other discussion to the amendment which is an amendment to delete Section 3?

DR. CAREY (Yuba): We have labored for two years over this on the Medical Services Commission. We have worked hard and long. I counted up the other day that this commission has put in thirty-six days of its time in either travel or consideration of these problems in this Association. In that time we have heard from dozens, almost hundreds of different people in organizations, and we have tried the best we can to come up with solutions which we felt would be to the general advantage of the public and to the medical profession as well. In the matter of this \$6,000 schedule we are speaking about, I wonder if it is entirely clear to the House that C.P.S. is not discontinuing the rate of its \$4,200 financial limit at the present time. This is not a fact at all. What we are doing in this particular resolution is the introduction of an entirely different policy, one that will contact a \$6,000 schedule.

SPEAKER CHARNOCK: Now, Dr. Carey, may I interrupt just a moment. Are you speaking to the amendment?

DR. CAREY: Yes, sir.

SPEAKER CHARNOCK: Right.

DR. CAREY: This is a preamble to the amendment. (Laughter.)

Now, if the county requests that C.P.S. write this sort of thing in their county the rest of us throughout the state are agreed that we will respect their decision in that manner. Now, in regard to No. 3, in order to have a local option, in order to make the \$6,000 schedule that we are talking about here operate at all, we must have that Section 3 in there. That is, those of us that are not involved in that particular county, they must respect the \$6,000 level that the county, that Orange County has accepted if we are to implement this thing and make it effective at all.

This is taken by your Study Committee as an alternative to offer you a \$6,000 state-wide ceiling. We didn't feel that you, nor did we, agree with that but we did feel that there are many areas in California where the fires are burning hot and where men are making various and sundry attempts to solve their individual problems, not only with plan systems but with other systems as well. And it is to offer these men a tool to work with that we have set up this particular plan. I hope you will turn down the amendment as proposed.

SPEAKER CHARNOCK: Thank you, Dr. Carey. I wanted to be sure you were talking about this amendment. Is there any other discussion?

DR. DAVIS: I should like to ask a question. I am a little bit confused as to the matter of procedure. Does this mean that the contract is issued in the county in which the major number of employees

happen to reside or happen to work, or does this mean that the contracts on a state-wide basis will still have a certain amount of local control but that if a patient who is in one spot and moves to another spot is still covered?

In other words, put it this way, Standard Oil Company has one large group with C.P.S. I don't know where the largest group of Standard Oil employees happens to reside. I presume it is in Los Angeles. I don't know either just where the main office of Standard Oil is. I think it is in San Francisco, but it may also be in Los Angeles. In any event, is this to be interpreted that a contract then which is issued and gives certain rights, privileges and prerogatives to employees of the Standard Oil Company, and is issued in Los Angeles under the auspices and approval of the Los Angeles County Medical Society becomes applicable to all Standard Oil employees who may be in any other part of the state, in portions of the state where only a few of the employees are at present located?

Because if that be true then the more large groups that we take into the C.P.S., the more of these that we get, the larger percentage of the total people covered who belong to those large groups, the more effective then the larger counties will be in deciding whether or what the conditions will be under which the less populous areas will practice. I would like that cleared up.

SPEAKER CHARNOCK: Thank you, Doctor. Are you going to answer that?

DR. TEALL: Yes, sir.

DR. TEALL: Mr. Chairman, the position as outlined by Dr. Davis is the way we see the situation. It is impossible in any resolution before this House to spell out every contingency of every small point and policy, but I believe that your statement of what would happen in a Standard Oil group is what is anticipated by Section 3 here. A phrase was coined in consideration of this matter which I think is an excellent phrase, that the adoption of this section of this resolution is a manifestation of the *esprit de corps* of all of the doctors in California who are physician members of California Physicians' Service in helping local branches or local county societies to solve their own problems. (Applause.)

SPEAKER CHARNOCK: Is there any further discussion on the amendment?

A MEMBER: Question.

SPEAKER CHARNOCK: Those who are in favor of the amendment made by Dr. Moore to delete Section 3 will signify by saying "aye." Those who are opposed to the amendment to delete Section 3 will signify by the usual sign.

... There being no further discussion, the motion was put to a vote...

SPEAKER CHARNOCK: Now, the Chair is confused. The amendment has lost. The Chair is back on the beam. Excuse me, gentlemen. Will you proceed with moving the adoption?

DR. FOSTER: I move the acceptance of this section of the report as amended.

SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be adopted as amended. Is there any discussion? Dr. Bender. (Laughter.)

DR. BENDER: Mr. Speaker, and members of the House: My remarks will be very brief. I think what a number of us are worrying about is the fact that something just the reverse of what Dr. Davis has suggested might take place. For instance, in San Pedro the Longshoremen's Union might be signed up to a contract on the San Pedro schedule under a \$4,200 ceiling which is under the current fee schedule without a ceiling. That then would become state-wide and the local—or the whole state would be stuck with it.

That is what people are concerned about and that is what would destroy local option in the true sense of the word.

The other remark I have to make is that is unless the acoustics were wrong where we happened to be sitting back there the author of Resolution No. 5 has stated that he didn't see any reason for it at all, and I urge that as a reason for voting against it. (Laughter.)

SPEAKER CHARNOCK: Is there any further discussion to the acceptance of this section of the report? Dr. Sirbu of San Francisco.

DR. SIRBU: Mr. Speaker, I will be very brief.

Just two points. In the first place by defeating the amendment of making the Usual-Fee Indemnity Plan on the local basis you have spoken against that particular issue piecemeal.

Now it is the contention of many of us, substantiated by the word of many of the members of the Medical Services Commission, that Resolution No. 5 as amended is not the ideal answer. Primarily the Usual-Fee Indemnity Plan is the answer of organized free medicine to this problem. It is also the expressed opinion of members of the Medical Services Commission that the adoption of Resolution No. 5 will delay and impair the eventual formulation of the Usual-Fee Indemnity Plan which is the ideal plan.

Now, by voting for Resolution No. 5 you are in effect defeating the best plan that is possible. Certainly you are delaying it for a long period of time.

Now, gentlemen, there is just one question I think that we should have answered here. We are asked to raise the ceiling to \$6,000 which is in effect a 42 per cent increase in the ceiling which incorporates some 25 or 30 per cent more of the people under this service plan. I think that before we take that action we should be entitled to know, not exactly but in generalities at least, approximately what fee schedule we will be operating under. I submit that if you want unity, not only between the internists and the rest of the profession, but between all of organized medicine, be it specialists, be it urban practitioners or be it country practitioners, we should know approximately what's going to happen on this.

I again submit that when we adopt this it is going to influence our negotiations with every prepaid medical plan. We have been given to understand that

the most likely initial fee will be about 10 per cent higher than the present scale. We have also been given to understand that that might be weighted more on the visits basis rather than on the Southern California medical procedures basis.

I think we are entitled to know what we are voting about. I would like to ask that question. (Applause.)

SPEAKER CHARNOCK: All right, Dr. Foster.

DR. FOSTER: I wish I could answer that question clearly but on equivocation I cannot do it. The reason I cannot do it is that the recommendations of the Fee Schedule Committee have only been formulated within the past few hours and they are not in sufficiently final shape that we feel they should be reported here, because it may be necessary to make additional revisions. I think the statement made by Dr. Sirbu is approximately correct, that possible changes are in the neighborhood of 10 per cent in fees and 10 per cent in premiums but that is a point again that cannot be stated as an accomplished fact or an absolute recommendation at this point.

I would like to emphasize what I said a moment ago, however, which I think should clarify this, we are not asking San Francisco to adopt a \$6,000 ceiling. We are not asking Los Angeles to adopt a \$6,000 ceiling. We are not asking any society or any branch or any doctor to support or adopt a \$6,000 ceiling. If in your situation you feel that a \$6,000 service contract is desirable, you have the privilege of requesting that C.P.S. write that contract in your area.

You already have that privilege as a matter of actual operational procedure. At the time that you request it there is every reason to believe that C.P.S. will be able to tell you to the nearest decimal point what the proposed fee schedule will be on a statewide basis for those \$6,000 contracts. I wish I could answer it. I cannot. But you will answer it for yourself before you request on the basis of your own decision, on the basis of your own need, as to whether you do or do not want the \$6,000, and you will have every opportunity to accept or reject the proposed fee schedule at that time. (Applause.)

SPEAKER CHARNOCK: You have heard the discussion upon the acceptance of this resolution.

DR. ROLF (Westwood Village): I personally believe there is no universal solution to this problem. That we are too heterogeneous a population in this state. I have practiced in both rural and urban areas and I can appreciate the difficulties the committee has gone through in trying to arrive at this solution.

I know also that rural people or small community people will go to specialists in the large city and as this resolution is written I think it is dangerous in that way, especially as the facts the medical man whom these people will come to see for diagnosis where they expect an hour of time rather than the five- or ten-minute office call. A service type contract at present could permit a doctor to conduct a dispensary type of service seeing perhaps ten patients an hour if he would care to assign that time to specific patients. In Part I. I believe that you are signing a blank check unless there is some specific notation

as to what type of income comes with a \$6,000 ceiling. Actually I believe this would take about 90 per cent of each doctor's practice. Personally I believe this resolution should be tabled until we have had more specific matters discussed. Thank you.

SPEAKER CHARNOCK: Dr. Mauer.

DR. MAUER: Mr. Chairman, members of the House of Delegates: A \$4,200 income ceiling was selected to provide medical service for a low income group. The \$6,000 income ceiling is designed for an entirely different problem. I merely wish to point out that should it be adopted the pattern of the fee schedule under the contracts written at that level will serve as a pattern for all other insurance carriers, private as well as public.

SPEAKER CHARNOCK: Thank you, Dr. Mauer.

DR. MILLER: Mr. Speaker, was there not a motion to table this resolution?

SPEAKER CHARNOCK: I heard none.

DR. BLOCH (San Pedro): It seems that the southern branches of Los Angeles County, San Pedro, has been the offending party in this deal inasmuch as the doctors in San Pedro were faced with the condition which demanded revision of the C.P.S. ceiling. With your permission I would like to have the doctor, Dr. Korn, who has been the chairman of this committee of doctors in the southern branch, go into the details of this conversion.

A MEMBER: No.

SPEAKER CHARNOCK: Dr. Korn is not a member of this delegation. It will require unanimous consent. Do you wish to put that to the House?

DR. BLOCH: If you will, please.

SPEAKER CHARNOCK: Dr. Korn from San Pedro has information regarding this matter. It will require unanimous consent of the House for him to appear before you. All those who are in favor of Dr. Korn's appearing will signify by saying "aye." To the contrary?

... There being no further discussion, the question was put to a vote and it was lost. ...

SPEAKER CHARNOCK: Dr. Korn is out. Is there any more discussion? Dr. Green.

PRESIDENT GREEN: Mr. Speaker, members of the House: I should like to say a word to this question. This reminds me of a large family who wish above all else to build a wonderful building, an edifice that they will be proud of and will be succeedingly proud of in other generations. So they select after a discussion an architect in whom they believe thoroughly. They have discussed the number of architects that they might have. So your architect has been selected. Then the architect in the very beginning says, "All of you being members of the family, what would you like to have?" And after several weeks and many hours of deliberation and one thing and another you think you have all the specifications. You have everything that you desire.

After that is all done then the architect comes in and he has made a drawing of what he believes that

you should like to have. And you tell your architect, "I don't want to look at the picture."

SPEAKER CHARNOCK: Thank you, Dr. Green. I am sure the Los Angeles delegation is fully familiar with architects. (Laughter.)

Dr. Carey.

DR. CAREY: As one of the architects I would like to pass on another bit of information to you. Oregon and Washington to your north both have \$6,000 ceilings. There are several other states that have \$5,000 ceilings. I thought you would be interested in knowing that.

SPEAKER CHARNOCK: Is there any further discussion upon this resolution as a whole? The Chair hearing none—Those who are in favor of the passage of Resolution No. 5 as amended will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote. ...

SPEAKER CHARNOCK: The Chair is in doubt. Will those who are in favor of passing this resolution as amended please stand? Will all those in the wings come in so they may be counted because this is an important vote.

DR. TRUMAN: Mr. Chairman, there is a doubt as to the amendment. Would you please have it read before the vote is taken?

SPEAKER CHARNOCK: It was Dr. Bullock's amendment making a passage of No. 4 as the amendment, sir. It makes a Section No. 4, let's put it that way, I didn't mean to pass it.

DR. TRUMAN: Wait a minute. May we please sit down and have it read?

SPEAKER CHARNOCK: All right. That will be read again. Will you please sit down? Mr. Secretary, will you read the amendment which has been passed? Will Dr. Bullock please read it? This is the amendment which has been passed and which forms Section 4 of this report.

DR. BULLOCK:

"Resolved—"

One, two and three are exactly as they are at the moment and in addition thereto Paragraph or Section 4 reads as follows:

"WHEREAS, The present fee schedule does not adequately cover the type of service characteristic of the practice of internal medicine that beneficiaries of C.P.S. either be advised that the services of internists are not included or that the directors of C.P.S. be instructed to immediately develop a method for covering services of internists for beneficiaries of C.P.S."

SPEAKER CHARNOCK: Is that quite understandable now?

DR. TRUMAN: Thank you.

SPEAKER CHARNOCK: Will the members in the back of the room or the spectators if they so be, who are not voting on this proposition or are not entitled to vote, will you please sit down? Squat down, I guess it will have to be.

Now, those who are in favor of Resolution No. 5 as amended will please stand.

... There was a standing vote. ...

SPEAKER CHARNOCK: Will you please be seated, gentlemen? Those who are opposed to Resolution No. 5 as amended please stand.

... There was a standing vote. ...

SPEAKER CHARNOCK: The resolution wins 128 to 81. Thank you, gentlemen. At this time I would like to have you take a deep breath in order for the stenographer to change her little reel and get ready for another two or three hours.

At this time I would like to present John Marshall and Gene Mendelsohn. Will Jerry Pettis please bring them forward?

John Marshall is a Junior in the College of Medical Evangelists and is president of the Student A.M.A. section. John Marshall. (Applause.)

Gene Mendelsohn is a sophomore at U.S.C. and is president of the Student A.M.A. at that institution. These young gentlemen were pulled out of their work at their respective schools to come to be presented to the House today. Thank you for being here. (Applause.)

These young gentlemen recently appeared in Chicago at the Student A.M.A. Convention.

Dr. Foster, will you proceed?

DR. FOSTER: The next resolution, Number 9, introduced by Samuel Sherman, San Francisco County. It was originally referred to Reference Committee No. 3. Finally it got over to us and in between the two of us, between the two committees it didn't get printed so I will read it to you.

"WHEREAS, The C.P.S. has now established two different methods for prepayment care of the sick, namely service type plan and indemnification plan; and

"WHEREAS, These two types differ in structure, organization, required reserve and are under different jurisdiction, namely, one, the service type under the Attorney General, two, the indemnity type under the Insurance Commissioner; and

"WHEREAS, Under the above conditions the financial structure must of necessity be separate and distinct; therefore, be it

"Resolved, That the financial contribution of the service plan to the indemnity plan be limited to the very minimum necessary to assure performance of contracts entered into; and

"Second, that the directors of the Indemnity Corporation conduct its business in a conservative manner."

Resolution No. 9 in effect calls for minimizing the activities of the Indemnity Corporation previously authorized by the House of Delegates. This resolution is incompatible with vigorous prosecution of the Usual-Fee Indemnity Plan as recommended by the Medical Services Commission and previously authorized by the House of Delegates.

Therefore, your committee recommends it "Do Not Pass."

SPEAKER CHARNOCK: It has been moved and seconded that Resolution No. 9 do not pass. Is there any discussion? Dr. Sherman.

DR. SHERMAN: Mr. Speaker, I cannot reconcile my thinking with that of this Reference Committee. It was not the intent of the Resolutions Committee which formulated this resolution to in any way at all minimize the activities of the Indemnity Plan. We are very hopeful that when the Medical Services Commission is able to implement the Usual-Fee Indemnity Plan and put these plans in operation that they will go into operation but on a sound, conservative, businesslike basis. It will be one which will not tend in any way at all to bankrupt the financial facilities of our service plan which is in effect subsidizing this Indemnity Plan.

To quote the words of Mr. Hamman, the Director of C.P.S., when this was discussed in the Reference Committee, he said that "Dr. Sherman in his resolution sounds very much like the Directors of C.P.S. when they urge conservatism and caution in entering into these indemnity plans." That was our only intent and we hope that you people will recognize it as such and support the passage of this resolution.

SPEAKER CHARNOCK: Are you discussing this resolution?

DR. OGDEN (Kern County): Yes. I was somewhat hopeful that this resolution would hinder the expansion of the Indemnity Plan in C.P.S. The time has passed when we as doctors are going to say what we want, what we are going to receive in the way of pay and what we are going to do to a great extent. The plans we sell are going to be the ones we can sell, possibly not the ones we want, but the ones we can sell and in spite of the formidable evidence and of the testimony of men that I readily admit are much smarter and of much greater experience than I am, that Indemnity Plan isn't what people want or the one that can work better. I am completely unconvinced that an Indemnity Plan is the one they want. From the experience that we have had for thirty years in Kern County we have had a full service plan, a plan with no limitation, no qualifications at all, a complete, full service plan with no income ceiling.

In 1926 the Supervisors of Kern County built a 600-bed County Hospital, a beautiful hospital, beautifully equipped with a full staff which they paid. In order to justify that and to show that the Supervisors were for the taxpayers, there was a wide-open admission policy. As it came out in one of the official publications from the County Hospital, the use of the County Hospital shall be as free to the taxpayers as use of the roads.

Our people liked that plan. They liked it so much in fact that about the only way we ever get rid of a Supervisor is to have him die off. A Supervisor told a committee of the Medical Society when we checked on him one time, we met with him once and he told us that he was not in favor of a wide-open hospital policy. He came out in the paper in an advertisement that he was in favor of it. When we got hold of him he said, "I am not really in favor of it but

nobody can get elected in Kern County who is against a wide-open hospital policy."

What people want, at least in Kern County, is a service plan as wide and as free as they can have it. So I was hopeful that this resolution was to some extent going to hinder the service policy. Thank you, gentlemen.

SPEAKER CHARNOCK: Is there any other discussion to this resolution?

SPEAKER CHARNOCK: Are you ready for the question?

DR. FOSTER: When Dr. Sherman discussed this resolution he said that he felt that the Board of Trustees were conservative as I understood his reactions, and it seemed to the Reference Committee that this resolution was a matter of more or less of a vote of confidence, and I believe that a vote of confidence could be best given to our Council and Medical Services Commission by voting "Do Not Pass."

SPEAKER CHARNOCK: Are you ready for the question?

A MEMBER: Question.

SPEAKER CHARNOCK: You will realize that in voting "yes" on this resolution you will kill the resolution. Voting "no" upon the resolution, then the resolution will stay as read. Those who are in favor of this section of the report will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: This section of the report is passed. Will you proceed?

DR. FOSTER: Resolution No. 10, introduced by Dr. Samuel R. Sherman of San Francisco County.

"That the C.P.S. Trustees carry only the average reserve recommended by the National Association of Insurance Commissioners in order that the full amount of an adequate Fee Schedule can be paid." This is an administrative function, and should be left to our responsible elected representatives.

Action taken by this House at the Interim Session in December 1953 equalized the value of units to avoid month-to-month variations, so that the Unit Stabilization Fund is not expected to increase at an unwarranted rate.

Your committee therefore recommends "Do Not Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: This section of the report has been moved and seconded. Is there any discussion?

A MEMBER: Question.

SPEAKER CHARNOCK: You will realize again that voting for this section of the report kills the resolution. Those in favor of this section of the report will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: This section of the report is passed.

DR. FOSTER: Resolution No. 11, introduced by Samuel R. Sherman, San Francisco County Medical Society. I believe that you have this in front of you but I will read just the reaction of the committee. The complexities of fee schedule determination are beyond the capacities of a half hour's debate in this House and this problem must be referred for immediate implementation, recommendation and action to the Medical Services Commission. Therefore, we refer this resolution to the Medical Services Commission.

Mr. Speaker, I move you the adoption of this section of the report.

SPEAKER CHARNOCK: In adopting this section of the report this resolution is referred to the Medical Services Commission. Is there any discussion?

A MEMBER: Question.

SPEAKER CHARNOCK: Those who are in favor of this section of the report will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: You may proceed.

DR. FOSTER: Resolution No. 12, introduced by Samuel R. Sherman, San Francisco County Medical Society.

"Resolved, That if the \$6,000 gross family annual income ceiling is adopted by the C.M.A. House of Delegates with its accompanying increased fee schedule, C.P.S. may be permitted to write policies for lower income ceilings provided that there be concomitant and equitable increases in the C.P.S. fee schedule for these groups."

The committee reemphasizes the fact that the adoption of the \$6,000 ceiling is on a local option basis. The creation of several levels of family income ceilings would become confusing and impractical, and for this reason your committee feels it would be an unwise procedure.

We therefore recommend this resolution "Do Not Pass." Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: This section of the report has been moved and seconded and is now open for discussion.

A MEMBER: Question.

SPEAKER CHARNOCK: Those who are in favor of this section of the report—I again emphasize this is a "Do Not Pass"—will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: This section of the report is passed.

DR. FOSTER: Resolution No. 13, introduced by Garnett Cheney, for the California Society of Internal Medicine.

"Resolved, That the following principles be accepted:

"1. Each physician member rendering service as a C.P.S. professional member shall be requested to declare himself as to his field of practice, whether surgical or non-surgical.

"2. A non-surgeon member shall be a physician who derives 5 per cent or less of his professional income from surgical procedures.

"3. The present fee schedule of C.P.S. is to be elaborated to include a detailed schedule of diagnosis and treatment of major medical illnesses.

"4. Physicians practicing as non-surgeons shall be prepared to make available upon request a suitable case report to the Medical Director of C.P.S."

The intent of this resolution has been anticipated by current activities of the Medical Services Commission and its Fee Schedule Subcommittee. There will be inaugurated immediately a pilot program to determine whether or not the total fee concept is applicable to major medical illnesses. The Medical Services Commission has assured the Reference Committee that it will press for an early solution.

In view of the above conditions, the committee recommends "Do Not Pass."

Mr. Speaker, I move the adoption of this portion of the report.

SPEAKER CHARNOCK: This portion of the report has been moved and seconded. Is there any discussion?

A MEMBER: Question.

SPEAKER CHARNOCK: I again emphasize this is a "Do Not Pass." Those in favor of this section of the report will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: This section of the report is adopted.

DR. FOSTER: Resolution No. 15, introduced by Randolph G. Flood, San Francisco County Medical Society.

"Resolved, That if the \$6,000 gross family annual income ceiling is adopted by the C.M.A. House of Delegates with its accompanying increased fee schedule, that this income ceiling level and its fee schedule be considered the only ones in existence on the expiration of all present C.P.S. policies."

It is important to medicine that it retain the program for the low income group, an important intent of C.P.S. It would be unjust to compel people with low incomes to pay the higher premium required for higher income groups. Furthermore, this would substitute the \$6,000 income ceiling state-wide, rather than on a local option basis, which is contrary to our previous recommendation.

Therefore, the committee recommends "Do Not Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: This section of the report has been moved and seconded. Is there any discussion?

A MEMBER: Question.

SPEAKER CHARNOCK: Again a "Do Not Pass." Those in favor of adopting this section of the report will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is passed. Proceed, Dr. Foster.

DR. FOSTER: Resolution No. 17, introduced by Dr. Edward H. Crane, Jr., of the Inglewood Branch of the Los Angeles County Medical Association.

"Resolved, That the House of Delegates instruct the Directors of C.P.S. to set up a fee schedule which is 75 per cent higher than the original 1939 fee schedule. Be it further

"Resolved, That the Directors of C.P.S. be instructed that they may pay that per cent of this fee schedule that is consistent with a solvent operation. Be it further

"Resolved, That the Directors of C.P.S. review this schedule each year for question of alteration."

The committee rejects the resolution contemplating an increase of 75 per cent in the 1939 medical fees.

The Medical Services Commission is now making a relative value fee survey, from which it is hoped a realistic fee schedule will be established. There is no purpose in compounding the inequities of an old 1939 schedule on any basis.

For these reasons, your committee recommends "Do Not Pass."

Mr. Speaker, I move the adoption of this portion of the report.

SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be adopted. Is there any discussion? Dr. Crane.

DR. CRANE: I had hoped that the committee would read all the whereases in this resolution. It seems to me that their conclusions here have more or less disregarded the purpose of the resolution. We have set here in this meeting today a possible ceiling for any portion of the state of \$6,000 for C.P.S. I see no reason why a C.P.S. fee schedule should not reflect the usual fee that you and I charge for what we do. The purpose of this resolution wasn't designed to immediately increase the amount of money that is paid the physician. That wasn't the desire of the resolution at all, and if you read the whereases you will see that this is true.

Our purpose was to set up in our C.P.S. fee schedule a schedule which reflects the thinking of the medical profession in this state as to what their services are worth as a means of a yardstick for insurance companies and other companies to be guided by so they will know what we feel in our own business, what our services are worth.

In this resolution it is stated that we would so instruct the Directors of C.P.S. to pay whatever portion of that fee schedule was commensurate with a solvent operation. In other words, we aren't asking that they increase the amount of money paid to the doctor at this time at all. That isn't the purpose of this resolution at all. So how can it possibly be com-

pounding an inequity? It couldn't possibly be compounding an inequity. If there are some small inequities in the original fee schedule, certainly there will be inequities in the increased fee schedule.

But what we are after here, and I want to reiterate this, what we are after here is to have on paper what we feel as medical men is an adequate fee for our services. If C.P.S. hasn't progressed to the point where they can pay that much yet, well that is fine. We will go along with that 100 per cent, but we feel that the public should know what we feel our services are worth and that is the purpose of this resolution, and I feel that the committee has entirely ignored that. (Applause.)

DR. KILROY (Sacramento): In considering this resolution the committee of course must consider the body of the resolution in the resolve and in that body it is stated that there would be a 75 per cent increase based upon the 1939 fee schedule. The inequities arise in the 1939 schedule and arise on this basis, a fact probably not known by too many, but that schedule was derived in actuality from the industrial accident fee schedule then in force. That was a traumatic schedule and certainly one that was unfair to those performing medical services.

It has been stated earlier and a statement with which I am in complete agreement, that those doing medical practices have not received a fair consideration. And certainly the 1939 schedule gave them practically no consideration. Considering therefore that there were inequities to raise that by 75 per cent is only compounding a felony. (Applause.) Therefore, your committee in considering the very basis for which this 1939 schedule arose felt that it could not be guilty of such compounding of a felony. Thank you.

SPEAKER CHARNOCK: Is there any further discussion on this section of the report?

DR. TEALL: Mr. Chairman.

SPEAKER CHARNOCK: Dr. Teall.

DR. TEALL: There are two problems involved in this resolution which I think it important to point out. First, that the House of Delegates instruct the Directors of the C.P.S. to set up a fee schedule. It has been the established practice that the fee schedule in so far as it concerns the relative value of the items, that that fee schedule arise from the California Medical Association as such and not from the California Physicians' Service administration. The function of the California Physicians' Service administration is to determine what may be paid on the basis of money in the pot at that moment on that fee schedule. It therefore will be narrower to pass this resolution as it stands directing the C.P.S. Trustees to set up a fee schedule.

The second problem is that the 1939 fee schedule was not set up in dollar units. You will remember that the original principle which was still in operation was that we would set up fees in relative values, that is, in units rather than dollars, and we just got in the bad habit of thinking of those units in terms of a pertinent part, but if we were to take the 1939

fee schedule and increase it by 75 per cent it would still be no schedule that was evaluated in dollars, so it would mean nothing for the purpose for which this resolution was introduced. If we were to take the 75 per cent increase of the 1939 fee schedule and put a dollar per unit value on it we might get somewhere, but remember that there have been several revisions of that fee schedule made since 1939 in an attempt to straighten out the inequities to which Dr. Kilroy just addressed himself.

We would therefore by going clear back to 1939 be compounding a much worse felony than if we were to simply add a certain flat percentage to the fee schedule as it exists today. It seems to me that this is a problem, just as pointed out by the Reference Committee, which is extremely difficult of solution that it is impossible to set up at this moment by any arbitrary fee schedule which is in existence a fee which all of us could accept as being a reasonable value of our own personal services wherever we practice within the state. I don't know whether it would be in order to simply propose that to defeat this, do not pass it as the Reference Committee has suggested, or whether you wish to refer it to the Council or to the Medical Services Commission for further study as reported there.

A MEMBER: Question.

SPEAKER CHARNOCK: The question has been called for. Those who are in favor of passing this section of the report will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: This section of the report is passed.

DR. FOSTER: Resolution No. 24, introduced by Carl M. Hadley of San Bernardino, San Bernardino County.

SPEAKER CHARNOCK: Dr. Foster, will you go back to Resolution No. 19?

DR. FOSTER: I am getting in a hurry.

Resolution No. 19, introduced by Henry Gibbons III, San Francisco County.

"Resolved, That the House of Delegates request the officers of C.P.S. to study and recommend means for the inclusion of specialized services in the benefits of its insurance policies."

This resolution describes a function which is not properly within the province of the officers of California Physicians' Service.

For this reason, the committee recommends "Do Not Pass."

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: This section of the report has been moved and seconded. Dr. Gibbons.

DR. GIBBONS: I do not quite understand or agree that this is not the province of the C.P.S. office to study but for the purposes of discussion I would like to move to amend this report by reintroducing this resolution for consideration.

SPEAKER CHARNOCK: I did not get that, Dr. Gibbons.

DR. GIBBONS: I would like to move to amend this report by reintroducing the original resolution for discussion.

SPEAKER CHARNOCK: Is there a second?

A MEMBER: Second.

SPEAKER CHARNOCK: It has been moved and seconded that the original resolution be introduced. Will you read the original resolution?

DR. FOSTER:

"WHEREAS, The maintenance of good health care is a prime function of the medical profession, and is essential for the success of voluntary sickness service plans; and

"WHEREAS, Adequate availability of service by medical and surgical specialists is an integral part of good health care; now, therefore, be it

"Resolved, That this House of Delegates request the officers of C.P.S. to study and recommend means for the inclusion of specialist services in the benefits of its insurance policies."

SPEAKER CHARNOCK: Now, this is the original resolution as introduced by Dr. Gibbons, and does not constitute an amendment. Are you now going to discuss this, Dr. Gibbons?

DR. GIBBONS: May I discuss the resolution?

SPEAKER CHARNOCK: The resolution as just read?

DR. GIBBONS: The discussion of the resolution then, it might be pertinent to ask for an opinion where this belongs. Regarding the resolution it may not be of immediate importance if this resolution is passed, but it must be admitted that the members of the medical profession practice side by side in communities where medical and surgical specialties are recognized both by doctors and by patients. And to defeat this resolution only serves to deny the truth of this situation.

Furthermore, making a study of including specialists' services in insurance policies, I believe, is long overdue. Therefore it would seem to me a healthy and forward-looking move to request C.P.S. officers to make such a study which is all this resolution calls for, and I urge the passage of this resolution.

SPEAKER CHARNOCK: Dr. Gibbons, may I alter that and say that you urge that you are speaking for the resolution as originally introduced? Now the only thing that Reference Committee did was to just take the resolve, it is exactly the same. So if this is not passed, why then your resolution stands as—

DR. GIBBONS: Yes.

SPEAKER CHARNOCK: Do I make myself clear?

A MEMBER: No.

DR. GIBBONS: If my resolution passes then that original resolution calls for referring to the C.P.S. officers to study.

Now, maybe somebody would like to question the opinion on that score.

SPEAKER CHARNOCK: As the Chair sees the proposition Dr. Gibbons has put in, he originally amended

the report of the Reference Committee by reintroducing exactly the same resolution that the Reference Committee has reported on, the resolve which the Reference Committee is reporting on is identical with the resolve in Dr. Henry Gibbons' resolution as I have it before me here, so he is just speaking against the passage of this section of the report.

Dr. Hodges.

DR. HODGES: May I state for the Board of Trustees of the California Physicians' Service that it would mean if Dr. Gibbons' resolution passed that the California Physicians' Service would then be put into the position of deciding who is and who is not a specialist. In effect it would become a pseudo certifying board and I don't think it is fair to put your California Physicians' Service in that position. (Applause.)

SPEAKER CHARNOCK: Dr. Askey. We will get expert clarification. (Laughter.)

DR. ASKEY: Ladies and gentlemen: In my capacity as past president I have a voice but no vote, so I just had to have one appearance before you. This is a very interesting thing to me in parliamentary procedure. Dr. Gibbons' resolution is before you. He doesn't have to reintroduce it at all. The only thing is that this committee is recommending that you don't pass it.

Now, if you don't want to pass it you vote for the committee. If you want Dr. Gibbons' resolution, kill this motion and it is passed. However, to clarify the thing, and using my voice, I would move that this be committed to the Medical Services Commission for further study.

A MEMBER: Second.

SPEAKER CHARNOCK: Are you moving to refer?

DR. ASKEY: Yes, sir.

SPEAKER CHARNOCK: Is there a second?

A MEMBER: Second.

SPEAKER CHARNOCK: It has been moved and seconded that this section of the report be amended to refer this to the Medical Services Commission. Any discussion? Those in favor of voting to refer this resolution to Medical Services Commission will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: It is referred.

DR. FOSTER: Resolution No. 24, introduced by Carl M. Hadley of San Bernardino County.

"Resolved, That the present system of affording medical and surgical care by California Physicians' Service shall be abolished and a new concept of such care be established in the form of a \$50 annual deductible type of insurance in which the individual family shall pay the first \$50 per year for any medical and surgical expense, and the California Physicians' Service shall pay for the remainder to the limit of five years' care or \$5,000."

The concept of deductible insurance is not a new one to California Physicians' Service nor to the

Medical Services Commission, nor is it one which has been abandoned as one of many programs which can be integrated with others during the course of study.

The resolution as stated will abolish California Physicians' Service in its administration of a service plan, and will abolish the contemplated indemnity plan, establishing in lieu thereof a deductible plan without benefit of prior experience. Feeling this to be unwise, your Reference Committee advises instead that the principle of establishing a third form of insurance plan, a deductible type, be referred to the Medical Services Commission for their consideration and later report.

A long study has already revealed that the principles applying to health insurance with respect to automobile insurance are not necessarily comparable, and that many commercial carriers have entered and already left this field.

We refer this resolution to the Medical Services Commission.

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: This section of the report has been moved and seconded to refer Resolution No. 24 to the Medical Services Commission. Is there any discussion?

A MEMBER: Question.

SPEAKER CHARNOCK: Those who are in favor of referring Resolution No. 24 to the Medical Services Commission will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: It is so referred.

DR. FOSTER: The committee wishes to thank the several hundred enthusiastic delegates who attended the all-day hearing, and appreciate their interest and advice.

The chairman wishes to thank the members of his committee for their 100 per cent support and their long hours of toil.

Dan O. Kilroy, Fred A. Olson, Thomas A. Le-Valley, Dorothy M. Allen, James E. Feldmayer and especially Shirley Harcourt, our secretary, who stayed up practically all of last night, and on business too (laughter)—at least that is what she said. Our Legal Counsel—we want to thank our Legal Counsel who has spent a great deal of time with us, Howard Hassard, Mr. Roy Hamman of C.P.S., Mr. Rollen Waterson who is very valuable, and Ed Clancy of the California Medical Association Public Relations Department. Their advice and their time are made up and are reflected in here.

Mr. Speaker, I move the adoption of the report as a whole.

SPEAKER CHARNOCK: It has been moved and seconded that we receive this report as amended as a whole.

DR. FOSTER: As amended.

SPEAKER CHARNOCK: Is there any discussion to that? Those who are in favor will please signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

SPEAKER CHARNOCK: It is passed.

We want to thank those two committees. At this time we will take a few minutes' respite and please be here in exactly five minutes.

... Short recess. . . .

SPEAKER CHARNOCK: Will the House please be in order?

SPEAKER CHARNOCK: To conserve time we will have the report of Reference Committee No. 2. Dr. Vaughan.

REPORT OF REFERENCE COMMITTEE No. 2

DR. J. E. VAUGHAN: Chairman, Mr. Speaker, members of the House: Reference Committee No. 2 is composed of Dr. Thomas Hill, Mendocino County, Henry Gibbons III, San Francisco County, and myself.

The committee has reviewed and examined the report of the Secretary-Treasurer and Executive Secretary. We note with satisfaction the actual work of Dr. Albert Daniels as a participant in the field of the Committee on Postgraduate Activities as well as the further efficient work as a member of the Cancer Commission.

The committee wishes to call your attention to the report of the Executive Secretary, Mr. John Hunton, which enumerates his activities.

Mr. Speaker, I move the adoption of this portion of the report.

... The Chair was assumed by Vice-Speaker Bailey. . . .

VICE-SPEAKER BAILEY: This portion of the report has been moved and seconded it be adopted. All those in favor say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. . . .

VICE-SPEAKER BAILEY: This portion of the report is adopted.

DR. VAUGHAN: The budget proposed by the Council was studied and discussed. Due to the action of this House at the first meeting of this session, Item 17B concerning A.M.A. Delegates, it was necessary to make an increase of \$9,000 in the budget, making a total of \$21,000 to cover the anticipated increase in expenses.

Your Reference Committee in studying Item 19, Organization Expense, wished to call to the attention of the House the fact that this item is subject to a monthly budget report to be presented to the Executive Committee for its approval. The committee considered this a very important item for the expenditure of this fund. In view of the large appropriations in the budget the committee wishes to recommend that a careful review of the whole public relations program, both of the California Medical Association and the California Physicians' Service

be made with special attention to the possible duplication of activities and to the expense of the operation. The adoption of this budget will set the dues at \$40 for 1955.

Mr. Speaker, I move the adoption of this portion of the report.

VICE-SPEAKER BAILEY: It has been moved and seconded this portion of the report be adopted.

Dr. Lum.

DR. LUM: Mr. Chairman, I would like to announce that the Committee on—Wait a minute, I will get that.

VICE-SPEAKER BAILEY: We have quite an assortment here.

DR. LUM: After so many hours your brain cells get a little fatigued.

That the Committee on Public Relations make a very careful study and evaluation of public relations and C.M.A. in order that there will be no duplication and in order that public relations will be carried out most effectively.

I would like to name the personnel of that committee, read it for you. Chairman of the Committee on Public Policy and Legislation, Dr. Dwight Murray; chairman of the Committee on Medical Economics, Dr. Fraser; chairman of the Committee on Associated Societies and Technical Groups, Dr. Grayson; the President, Dr. Morrison; President-Elect, Dr. Shipman; Dr. Lafe Ludwig and Dr. Frank MacDonald.

VICE-SPEAKER BAILEY: Thank you, Dr. Lum. And the motion is on the adoption of the report or this section? Have you finished the complete report? The adoption of this section of the report? All those in favor of the report say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. . . .

VICE-SPEAKER BAILEY: It is adopted. Continue, please.

DR. VAUGHAN: Your committee has before it for consideration one resolution submitted by Dr. William L. Bender, San Francisco, Resolution No. 2, which you have before you. While the committee approves heartily of the principles of economy and the operation of California Medical Association which we believe is the objective of this resolution, we cannot agree that reduction of the allowance to officers for certain living expenses while on official business will amount to any substantial saving. At the time, it seems the uniform \$25 per diem for these officers is much easier and more suitable a method of disbursing; we therefore recommend that this resolution "Do Not Pass."

Mr. Speaker, we recommend the adoption of this portion of the report.

VICE-SPEAKER BAILEY: You have moved and seconded to accept this portion of the report. Dr. Bender?

DR. BENDER: Mr. Speaker, members of the House: I constructed and submitted this resolution with two purposes in mind; one savings, which I still be-

lieve will be the result of the resolution if it should be adopted; and the other is actually a treatment for all of those who serve in official capacity, away from home, the California Medical Association.

This resolution has been introduced impersonally with malice toward none, I assure you. The fact remains that the principle of paying the actual expenses of those of our representatives who are traveling already is in effect for all members of committees and for all employees of the California Medical Association and for employees of the California Physicians' Service, although the trustees and officers receive the same \$25 per diem. The previous resolution along this line which was so roundly defeated on Sunday was introduced before we received our \$251,000 deficit in the budget for the next fiscal year and it seems to me that any means of saving money might be a little more acceptable in light of the budget that has been submitted to us.

There are a number of extra calls on our resources. You had one resolution today directed towards the help of young men studying medicine and particularly those who are just out of medical school who are having quite a struggle to exist and to whom the temptations of closed panels is really very great. I want to point out a little precedent also in the matter of paying expenses of traveling representatives of constituent states of the medical associations. It is noted in another part from one of the polls (the second one which I mentioned on Sunday), this one of March 1954, in which returns were received from 49 associations—or rather from 48 and I do of course have the figures of the California Medical Association relative to the support of the delegates to the American Medical Association sessions. Those associations who pay the actual cost of travel, "no" 41 out of 49. Those who pay the actual cost of maintenance, "no" 24 out of 49. Those who pay a per diem for maintenance, "no" 14 out of 49; and the range varies from \$5.00 per diem in addition to the travel, expenses being paid to \$25 per diem.

There are three in that category in the \$25 per diem category; included there the California Medical Association. Of those 14 who pay the per diem the mean payment each day for expenses, room and meals, that is \$15. The average is \$12.50. Those who pay lump sums to include travel and maintenance pay anywhere from \$200 per meeting to \$500.

Washington State is high with \$500. It is remarkable that wealthy Texas pays only \$250 per delegate including travel and maintenance. Two states pay nothing, West Virginia—and only travel is paid by Alaska and Florida.

Pennsylvania pays the maximum of \$450 to San Francisco and Georgia for instance pays a total of \$200 to include both items for delegates attending on the East Coast whereas if they come to the West Coast they get \$300.

So you see as far as the other state medical associations are concerned, they are operating at a considerable lower schedule of financial support of their travel representatives than the California Medical Association is. It is noteworthy in view of the dis-

cussion of the Editor's salary on Sunday that the New York Medical Association was cited as paying a salary of \$7,200 a year to its Editor. That of course is high for the nation, but New York State gets a little more careful when they pay the traveling expenses of their delegates, and they are on an actual expenditure basis which my resolution recommends for both travel and meals.

We often speak on the waste and the inadequacy of operation of our governments and it is interesting to note that the United States Government, even under the New Deal and the Fair Deal, and still does pay actual cost of travel or six cents a mile if the individual drives his own car, and maintenance at the rate of \$9.00 per day. A colonel or any officer or any civil employee gets \$9.00 a day for his room and his board, and this from the big wasteful United States Government of ours which we were glad to see taken over by a very economic minded new Administration recently.

The State of California pays the actual travel cost and for maintenance; they pay \$5.50 a day for meals and \$5.50 a day for room, so I simply submit to you the facts that the California Medical Association is extravagant as compared with other comparable organizations.

Expenditures of this sort—I think that the quarter million dollar deficit budget means that we have got to start to tighten our belts just a little bit and be economical in the operation of the California Medical Association if we are going to remain solvent. If we actually spend this \$250,000 in the next fiscal year we will have used up a half or over half of the revolving fund we keep for that purpose. It is thought that we won't spend that money but in my opinion that is mostly wishful thinking and also that it has been stated that we probably won't have to keep the \$183,000 item relative to Mr. Waterson's program continued more than a year or two, but that again is wishful thinking. What we are in is a long-term battle and the one who fights the best consistently is going to win out.

So I submit it to you simply as a question of whether or not we who are here responsible for the solvency of the California Medical Association are going to operate our society on the basis of our emotions in which we like to be kind and nice to our fellow members or whether we are going to operate it on a sound business principle. Thank you.

VICE-SPEAKER BAILEY: Now, Dr. Vaughan, would you state what the committee recommendation was? Read the resolve, please.

DR. VAUGHAN: Our consideration was to leave it as we have it at the present time in operation, not to have it on the per diem.

VICE-SPEAKER BAILEY: Thank you. Then you recommend it do not pass, is that correct?

DR. VAUGHAN: That is correct.

VICE-SPEAKER BAILEY: All right. Is there further debate on this resolution?

A MEMBER: Question.

VICE-SPEAKER BAILEY: The committee recommends "Do Not Pass." All those in favor of "Do Not Pass" say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: That portion of the report is adopted.

DR. VAUGHAN: Mr. Speaker, we recommend the adoption of the report as a whole.

VICE-SPEAKER BAILEY: We have the adoption of the report as a whole.

DR. LUM, do you want to say something?

DR. LUM: The adoption has been seconded?

VICE-SPEAKER BAILEY: The adoption has been seconded. If you will now discuss it, Dr. Lum.

DR. LUM: Before this report is adopted as a whole I would like to discuss the budget with you briefly for your better understanding. There are elements in it that you may wish to discuss.

On your budget sheet you see three lines of figures. Let's clarify it. The first, the budget 1953-54. The second column where it says estimated, that is estimated expenditures, 1953-54 up to July 1, 1954. That is why the word estimated is there. The third column that we are interested in now, proposed budget for 1954-55.

Under income, membership dues, \$470,000. This is based on dues at \$40 a year, \$3.00 of which is paid to CALIFORNIA MEDICINE, a requirement under postal legislation. \$470,000 in dues.

Second, your Annual Session brings in \$24,000 from rental of space to exhibitors.

Postgraduate programs, \$12,250.

Interest on short-term Treasury notes, \$3,500.

Miscellaneous items, \$2,700.

The total anticipated income of \$512,450.

Expenditures: Items 6, 7, 8, 9 and 10 are self-explanatory.

Item 11, you will note that there has been a raise in the budget over last year due to the increased activities of the California Medical Association in the Los Angeles area. It was necessary to enlarge the office, hence the increase in the budget item.

Items 12A and B remain constant practically.

Item 13 essentially constant; 14 constant.

Item 15, you will notice a drop, \$4,260 to \$480. Dr. George Kress received a pension from C.M.A.; of course with his passing that item is deleted. The \$480 is a pension to a clerk who was in the office for many years. This has been an item on the budget for a period of time.

Item 16A, constant; B, constant; C, constant; D, constant.

Meeting expenses, 17. Annual Session remains the same. Item B has been changed. For the last several years the alternates have been going to one meeting of the A.M.A. a year, either the Annual or the Interim Session. You will note that the estimated expenses this year were lower because one A.M.A. meeting, as you know, was in San Francisco. As a result of the action of the House of Delegates sending alternates to both the Annual and the Interim Ses-

sion each year this item has been increased to \$21,000, increased \$9,000.

17C remains the same. Student A.M.A. remained the same. I thought you might be interested in that. There are four chapters of the Student A.M.A. in California. The California Medical Association sends delegates from each one of these chapters back to their Annual Meeting in Chicago. This has been a very worthwhile expenditure.

Memberships and subscriptions represent no additional expense, simply a new heading. That refers to subscriptions of the C.M.A. due to State Chamber of Commerce, California Taxpayers League, a few other organizations of that type, and the subscriptions to certain journals necessary for the employees.

Number 19, which was unfortunately omitted in mimeographing through a clerical error the other day—\$183,000 of this is to implement the action you took this afternoon. I think you all realize it has been necessary to expand and activate aggressive constructive programs in voluntary health insurance. As you know, Mr. Rollen Waterson has been retained to direct that service.

Mr. Speaker?

VICE-SPEAKER BAILEY: Yes, Doctor?

DR. LUM: I would like to ask permission of the House of Delegates for Mr. Waterson to discuss briefly the program.

VICE-SPEAKER BAILEY: Dr. Lum, if there be no objection from you we could continue with the rest of this report and get it out of the way. Then we could have Mr. Waterson.

DR. LUM: All right.

Number 20, miscellaneous expense, simply a basket for small items in which there is no other proper category.

Scientific, Education and Public Relations.

Item 21, Cancer Commission, \$29,415, approximately \$1,000 increase over the budget of last year.

Blood Bank Commission, \$10,000.

Postgraduate Committee, \$28,000. I would draw your attention to the fact that under income you see there is anticipated income of \$12,250 from this program so that your net would be \$28,000 minus \$12,250 income.

Medical Services Commission, \$15,000.

The Committee on Unlawful Practices has no need at the present time for any expenditure of money. Thank the Lord we have one item of zero.

Number 26, Medical Education, \$100,000. I am sure you all know the plight that medical schools, particularly private medical schools, find themselves in. The American Medical Education Foundation has been organized to assist them financially. Several years ago if you recall California Medical Association gave them \$100,000 to initiate their activity. During the past year there has been a drop in donations from California. Dr. Murray tells us that in a conference with President Eisenhower, President Eisenhower told Dr. Murray and Dr. Martin whom most of you heard yesterday, in substance, "I believe in free enterprise. I do not want to see Federal aid to medical schools. That is the responsi-

bility that the medical profession must assume. If it does not, something else will be done."

That something else means Federal subsidizing of medical schools.

Item No. 27—Before we pass that, may I say that if the House of Delegates accepts this that this \$100,000 will go to the American Medical Education Foundation specifically earmarked for private schools. I said that the donations of the California physicians had dropped. I would like to quote a telegram received from Hiram W. Jones, American Medical Education Foundation, yesterday:

"Two hundred twenty California physicians gave \$16,342.50 to AMEF in 1953. Medical schools reported direct contributions totaling \$54,103.50, from 2,105 California physicians.

"I am sure we realize there are physicians who have given the medical schools funds which those schools have not reported to the AMEF so that the voluntary contributions would be somewhat larger than this \$54,000 quoted."

From California for the first quarter of 1954 are 217 contributors giving \$10,000. The Council certainly urges that the California Medical Association do its part. This can be done either through a compulsory assessment which I am sure none of us would agree to, through a contribution of this nature from the California Medical Association or through a voluntary contribution, and to date the system of voluntary contributions has fallen flat.

On with the budget, Item Number—

VICE-SPEAKER BAILEY: Dr. Lum, may I interrupt you for just a moment. There seems to be comparatively little difference in the rest of the budget from last year; unless anyone wants to hear it read, the Chair would propose to consider three items. One is a \$188,000 item for organization expense. The other, this \$100,000 item, and the third is reconsideration of the action we took two days ago making it compulsory that alternates and delegates be sent to the A.M.A.

DR. LUM: Mr. Speaker, before you do that—

VICE-SPEAKER BAILEY: Go right ahead. I simply suggested—

DR. LUM: One point, I agree with you some of these are routine items. You will note that there is a deficit budget of \$265,845. You wonder how that shall be paid. The California Medical Association has \$465,000 in its treasury in short-term Treasury notes. Half of that will be required for the expenses of the Association until January 1, 1955. It is quite within reasonable expectation that any deficit budget could be paid out of that surplus. I want to bring out this point, this is not invading on the sanctity of the war chest. That money is held by the Trustees of the California Medical Association. This deficit budget would not remove one penny from that.

VICE-SPEAKER BAILEY: Thank you, Dr. Lum. Then it is in order for us now to ask Mr. Waterson, with the unanimous consent of the House, to speak

on the \$188,000 payment here for organization expenses. Mr. Waterson. Is Mr. Waterson here?

DR. LUM: Here he is.

VICE-SPEAKER BAILEY: Point of order here. Did I hear unanimous consent of the House? We didn't hear any objections. All those in favor of hearing Mr. Waterson will say "aye." Opposed?

... There being no discussion, the question was put to a vote and it was unanimously carried....

VICE-SPEAKER BAILEY: We hear unanimous consent. We might have had to recess otherwise. Mr. Waterson, please proceed.

MR. WATERSON: Mr. Speaker, members of the House of Delegates of the California Medical Association: You have this afternoon taken all of the action you could and should in order to meet the public desire for greater certainty of coverage under health insurance. That problem of course was the first to be solved and now we are discussing the means of implementing it.

We have been retained by the Council of the California Medical Association to achieve that. I am purposely here to discuss the budget but I need to describe to you very briefly the character of the campaign of the program that we intend to conduct and some of the problems in order for you to understand how we arrived at that figure.

We could not budget accurately. This is a fluid, constantly changing, dynamic field. We don't know what is going to happen tomorrow or what will happen the following day. Furthermore, the type of action that you took allows for, very properly, local option in every respect. And local activation. We have no ideas what counties will go in which direction at this time, what plans will be adopted, what will be required. But everything that we do will be under the direction of the local county society, to be inherently a local problem and work completely in cooperation with that society. But I want to repeat that it is impossible for us to tell at this time how many societies will act on which plans and what the problems will be. So that therefore we have budgeted a great deal more than we think we will need in order to meet contingencies, in order to meet emergencies, and I am sure that you can well imagine what some of these emergencies may be.

If, for example, a great deal of advertising is required in Los Angeles County the cost of proper coverage there is \$370 per inch of advertising space. If 100 inches are required in a single ad in the judgment of the doctors in that area and approved by the Executive Committee of the California Medical Association, that 100-inch ad would alone cost \$37,000. In some of your smaller societies you can get coverage for a dollar an inch as against this \$370 per inch.

This budget therefore should be considered as maximum figures. Again something to be used as needed, but it is not our plan to go into a great deal of paid advertising, to use it only as needed, to set up safeguards throughout the entire budget on this, providing that monthly budgets will be given by us to

the Executive Committee of the California Medical Association in advance and all major expenditures will be approved in advance by the Executive Committee of the California Medical Association. It is not our policy to go into the shotgun type of campaign. The work that we want to do here will, and that you will have permitted and authorized by your action today, is the type that will achieve public approval by the action itself, and I don't believe that a great deal of expenditure of funds for advertising is going to be necessary although you know that when you do things in the public interest, as you are doing them, the publicity comes of itself and that is our usual method of operation.

However, for our public education job, with eleven million people in California to contact, we will need additional personnel. We will need to use some of the media this budget includes for personnel and projected advertising. All of our progressive work has been carefully integrated with the Public Relations Department. There is no overlapping. Things that are budgeted for in the Public Relations Department budget are not budgeted for here.

Under the direction of the Medical Services Commission there is a great deal of work to be done in professional education on medical economics, on health insurance, on the Usual-Fee Plan, on the implementation of your action regarding the Usual-Fee Indemnity Plan this afternoon. That also will require aid, educational aids, printing and additional personnel. It will require meetings, in order to follow your orders; it will be implemented as rapidly as possible, we will need to bring chairmen of committees and officers of the county societies together in the very near future to outline in detail what the Usual-Fee Plan means, how it is to be implemented and how it could be implemented in each county. And in having done this we need to tell the public what we have done. It is also an item for consultation and research.

We may and probably will need consultants in a number of deals. Market analysts, perhaps, and layout experts, perhaps labor relations consultants, a number of things; actuaries, insurance consultants and others that we may need in order that our work will be best directed and in order to meet the specific problems that arise in each county.

As you understand, each county medical association as it embarks upon a program either of the raised income ceiling or of the Usual-Fee Plan or both requires a great deal of work in organization and planning, and also later in publicity and in selling, tailoring the actions of the insurance that can be sold in that local situation. Also, under this item is research. All of you know who operate in those areas where the closed panel plans operate that many patients pay their premium to the closed panel plan and yet go to their personal physicians for care at their own additional expense. We want to do research and see the extent of this. We want to be able to know how much this adds to the total cost of health insurance to the people who buy these plans so that the seemingly lower cost—I am sure will be

balanced and I am sure that all of you who operate and practice in these areas where there are closed panel plans know that this amount of money is an enormous one.

We also want to know something about doctor-patient relationships under various types of health insurance, about the incidences of malpractice, about the quality of medical care. These things are also covered under this project.

I want to reiterate the fact that we have a positive program or that you would have taken the action now so that we can sell people on insurance that will really be ready for certain coverage. However, we have certain intangibles to sell and intangibles are very difficult to sell. The concept of free choice of physicians has not yet been sold. I am sure that almost all of you are aware of this.

We need to tell people that it isn't only the choice of doctor that is important, it is the freedom to change. We need to tell them something of the problems of people who have gone into a closed panel plan, then want to go to their own personal physician are not then free to change to go to their own doctor without paying the entire cost and the loss of the protection for which they have paid. This concept needs to be told to them.

We also have this problem of incentive under the closed panel plan. It is obvious to all of you that the incentive of the closed panel plan is to withhold, to cheapen, to shorten that in medical care as compared to the incentive of the doctor of medicine in private practice to give care and to bring to his patient the best that there is in medicine. These are abstract things and difficult to sell and we will need all of your help in so doing.

Furthermore, your Medical Services Commission has asked that we do a great deal of work on the concept of the personal physician. This is of course one of the principal things that we have to sell. There is a great deal of education within the profession that needs to be done on how to demonstrate to patients the values of having a personal physician and a great deal of work that needs to be done with the public. We also have a problem of integration. Integration of California Physicians' Service, the Unlawful Practices Committee, the hospitals, the pharmaceutical associations, everyone else who is interested in this problem.

Finally you must remember that the stakes here are enormous, that we must not fail to do well during our first year to establish a good foundation for what will certainly be a long-range program.

I would be remiss in my responsibility to you if I did not budget enough to do the entire job that might be needed. However, as I have said before, we have budgeted a great deal more than we think we need. We think that your actions today and the subsequent actions of the county medical associations in implementing whatever plans to meet this public need or whatever actions they take are sufficient to win the battle in which we are now engaged.

Thank you very, very much.

VICE-SPEAKER BAILEY: Thank you very much, Mr. Waterson. (Applause.)

I believe it is fair for the Chair to state that there has been a tremendous amount of discussion on this and it has been very thoroughly studied and we are going to continue to do so. There being no further discussions of this particular item, I should like to go to Dr. Olney to discuss A.M.A. Delegates. Dr. Olney. That is item 17B.

DR. OLNEY: Mr. Speaker, I was one of the persons who voted in the affirmative on the amendment to send the alternates to the A.M.A. Inasmuch as there was a great deal of confusion on this issue in that the intent was to give the alternates experience with the A.M.A., but what's happened? It was not the intent that the Council should be directed to send all alternates to all meetings of the A.M.A.

I should like to move for reconsideration of this issue.

VICE-SPEAKER BAILEY: It is moved to reconsider and it is in order at this time. Is there a second to it? There is a second. Any further debate on the motion to reconsider?

If there is no further discussion, all those in favor to reconsider will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: The "ayes" have it and the motion is appropriately reconsidered. Will you state the question, Dr. Olney, that you wish reconsidered?

... Discussion off the record. ...

DR. OLNEY: I move that the alternates be sent to the A.M.A. at the discretion of the Council.

VICE-SPEAKER BAILEY: Is there a second to that motion?

A DELEGATE: Second.

VICE-SPEAKER BAILEY: Is there any discussion?

A DELEGATE: Question.

VICE-SPEAKER BAILEY: All those in favor will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was carried. ...

VICE-SPEAKER BAILEY: The motion is carried. The Council will make the decision.

Does anybody have any further points that they would like to discuss in the budget?

DR. GRAYSON (Sacramento): I would like to discuss Item 26.

VICE-SPEAKER BAILEY: Item 26 is Medical Education, \$100,000.

DR. GRAYSON: It seems that this is merely an alternative method of trying to accomplish the same thing that was attempted a year ago when an action was proposed to add \$25 to our C.M.A. dues. The pros and cons of that subject were discussed thoroughly and the \$25 addition was rejected. Again, this is merely another method of accomplishing the same purpose and it would appear that there is considerable compulsion in this method. Certainly we

would seem selfish if we were to say that we did not want to give \$100,000 for medical education. However, at this time we have approved an expenditure of almost twice this much for medical organization, that is for ourselves. However, we have approved expenditure of that money for our successors. We are guaranteeing them the type of practice that we ourselves desire, so we are spending that money for our successors and their assistants.

In order to save time and to bring this as rapidly as possible to a conclusion, I would move that Item 26 be stricken from the budget.

VICE-SPEAKER BAILEY: Dr. Charles Grayson of Sacramento has moved that Item 26, Medical Education, \$100,000, be deleted from the present budget. Do I hear a second?

... The motion was variously seconded. ...

VICE-SPEAKER BAILEY: The Secretary says that we have already accepted this report but I can't believe that a thing such as this should go before the House without debate to be considered. Is there a second to Dr. Grayson's motion?

A MEMBER: I second.

VICE-SPEAKER BAILEY: There is a second. Further debate on this item for \$100,000 for medical schools. Dr. Cline. I feel that we should reconsider this before we reconsider Item— Do you wish to reconsider it? The budget was passed in the first part of the report. The Speaker didn't realize that or he would have allowed debate on it previously and he still feels it is important to have further debate. Does anyone object to it? Please proceed.

DR. CLINE: I am afraid I am a little confused. Am I speaking to an active motion or to an accomplished fact?

VICE-SPEAKER BAILEY: You are speaking to the motion to delete the item of \$100,000.

DR. CLINE: Mr. Speaker, does not that require the reconsideration of the prior motion to accept the budget?

VICE-SPEAKER BAILEY: There seems to be no objection to asking it now. I asked the House just a moment ago.

DR. SHERMAN: Point of order, sir. I believe in order to discuss this now we should have a motion to reconsider this item on the budget of Item 26.

A DELEGATE: So moved.

DR. SHERMAN: And I so move.

VICE-SPEAKER BAILEY: It is moved and seconded that we reconsider this particular item on the budget, Item 26. I take it that the man who made the motion voted for the previous motion.

All those in favor of reconsideration of Item 26 in the budget will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was lost. ...

VICE-SPEAKER BAILEY: The "noes" have it. There is no further discussion.

Dr. Vaughan.

DR. VAUGHAN: Mr. Speaker, I move we adopt the report as a whole as amended.

VICE-SPEAKER BAILEY: There is a motion to adopt the report as a whole as amended before the House. Discussion? All those in favor will say "aye." Opposed?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: So ordered.

...The Chair was assumed by Speaker Charnock....

SPEAKER CHARNOCK: That brings us down, gentlemen, to some unfinished business. This morning there was a challenge to the election from the Third Councilor District. The Qualifications Committee consisting of the President, President-Elect and one Delegate from the Councilor District involved met and they will give their report. And I remind you that under Article III, Section 11 of the Constitution of the California Medical Association, if the committee reports in favor of the nominee's election the Speaker shall declare him elected. If the committee reports against confirming the nominee's election a three-fourths affirmative vote shall be necessary to sustain the report of this committee.

Dr. Green, the chairman of the committee, will please report on the action of the Qualifications Committee.

PRESIDENT GREEN: Mr. Speaker, members of the House: Your Qualifications Committee reports in favor of confirming the nominee's election. (Applause.)

SPEAKER CHARNOCK: It is the duty of the Speaker to declare Dr. Clifford Loos elected Councilor for a three-year term from the Third District comprising Los Angeles. Due to a mix-up in voting this morning there is a question regarding the election of Dr. Loos as alternate delegate to Dr. Askey. In this respect Dr. Loos has asked the privilege of the floor.

DR. LOOS: Mr. Speaker and members of the House: I can't tell you how grievous it is to me to see discord and disharmony in this organization. I cannot feel that this disharmony in regard to me—I believe it is true enough to say this is not because of myself, it is because of the medical organization of which I am a member. Dr. Sampson wanted me to make a statement which I am glad to do. It is reiteration of a policy that I have maintained for twenty-five years and that is that we will never in any group of people have our service—my organization—an exclusive matter that they have to take it or else, that there is no solicitation in any way nor will there be. You want to realize that my organization has the approval of A.M.A. It has had it for a number of years. It is inconceivable to me that through chicanery or deceit on my part that the A.M.A. would have accepted my organization if it had capitation or solicitation or advertising. The A.M.A. doesn't stand for such things.

I consider that my organization is no more a closed panel than any group of doctors is. It is free and open, for every subscriber I have has signed his

name that he wants to become a subscriber. You want to realize that there is a demand for, say, so-called closed panels. Some people want that. I think it is far better that an organization that is run ethically and adheres to those policies is allowed to exist than otherwise.

In order to stop all of this discussion and disharmony about this matter of this alternate delegate to Dr. Vincent Askey, Mr. Speaker, I wish to withdraw my name as a candidate. And furthermore, in this connection I wish to nominate for the position as alternate delegate to Dr. Vincent Askey, Dr. Don Charnock. Thank you. (Applause.)

SPEAKER CHARNOCK: The question of alternate to Dr. Vincent Askey is open and a certain character, Dr. Charnock, has been nominated. Are there any further nominations for positions of alternate delegate to Dr. E. Vincent Askey?

A DELEGATE: Move the nominations be closed.

DR. ASKEY: Mr. Speaker, I wish to rise here to second the nomination of Dr. Charnock. That is the parliamentary procedure by which I gained my stand here. What I want to say is this, gentlemen, ever since I knew anything about the profession of medicine, doctors have been trained to consider the welfare of the patient and the welfare of their profession, and today I have seen another example of a true physician being willing to submerge his desires to what he considers probably the best of medicine, the best interests of medicine.

I may state this, that the California Medical delegation to the American Medical Association has always tried to uphold the best interests of the patient and the profession of medicine and I have never seen a man of your delegation who did not submerge his interests to that of your interests and the patient. I have followed and have seen Cliff Loos do that for I think it is about eight or ten years now. The fact that he has made this move makes me proud of him, and the fact that he has voluntarily withdrawn rather than cause any disunity in the California Medical Association I think entitles him to our respect and our thanks and our admiration. (Applause.)

...The Chair was assumed by Vice-Speaker Bailey. ...

VICE-SPEAKER BAILEY: Thank you, Dr. Askey. Are there further nominations for this position?

A DELEGATE: Move they be closed.

A DELEGATE: Second.

VICE-SPEAKER BAILEY: It has been moved they be closed. Will you vote by acclamation or secret ballot? Acclamation. All those in favor of Dr. Charnock will say "aye." Opposed?

... There being no further discussion, the motion was put to a vote and it was unanimously carried. ...

VICE-SPEAKER BAILEY: Dr. Charnock, I am very happy to declare you elected.

...The Chair was assumed by Speaker Charnock.... (Applause.)

SPEAKER CHARNOCK: Thank you. Is there any further unfinished business, Mr. Secretary? There is no further unfinished business.

Under new business, Dr. Justin Stein has asked for the floor. It will only take one moment. Dr. Stein.

DR. STEIN: Mr. Speaker, members of the House of Delegates: The Committee on Military Affairs and Civil Defense met this morning and we have a resolution which we consider is urgent. It is very short and it is non-controversial and I would appreciate the floor to present this resolution.

SPEAKER CHARNOCK: Is there any objection to Dr. Stein, who is the chairman of the Committee on Military Affairs and Civil Defense, putting forth a resolution on that ground? The Chair hearing none, go ahead, Dr. Stein.

DR. STEIN:

"WHEREAS, The present law governing Civil Defense expires June 30, 1954, and there is great need for reorganization; and

"WHEREAS, For many years there has been confusion regarding Civil Defense, lack of adequate planning, policy making and information to the public; and

"WHEREAS, In view of the critical world situation in the light of recent developments, adequate security for the civilian population must be provided for; now be it

"Resolved, That there be established within the Department of Defense a Department of Civil Defense with equal status with the Departments of the Army, Navy and Air Force; and be it further

"Resolved, That the Department of Civil Defense be aided by a secretary who ranks equally with the Secretaries of the Army, Navy and Air Force; and be it further

"Resolved, That the chief operational officer of Civil Defense shall be a member of the Joint Chiefs of Staff; and be it further

"Resolved, That the California Medical Association Delegates to the American Medical Association be instructed to present a similar resolution at the next session of the House of Delegates of the American Medical Association."

Mr. Speaker, I recommend that this resolution "Do Pass."

SPEAKER CHARNOCK: Is there a second? It has been moved and seconded that this resolution "Do Pass." Is there any discussion? Are you ready for the question? All those in favor of the passage of this resolution will signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: It is passed.

I have two important announcements to make. The C.P.S. Board of Trustees will hold its organizational meeting in Conference Room 9 immediately following the adjournment of the House of Delegates.

Second, the Council will meet for a reorganization in Conference Room 6 at 6:00 p.m. — Conference Room 2, they tell me.

Dr. Dave Dozier.

DR. DOZIER (Sacramento): I would like permission of the House to introduce as an emergency resolution a resolution pertaining to distribution of funds under the Medical Education item recently passed by this House in the budget.

SPEAKER CHARNOCK: Is there any objection to the hearing of this resolution? The Chair hearing none, go ahead, Dr. Dozier.

DR. DOZIER:

"WHEREAS, Funds distributed by the National Education Fund are equally divided among medical schools regardless of their particular needs; and

"WHEREAS, Our own private non-land-grant schools are each in need of all monies available; and

"WHEREAS, Land-grant medical schools in this state have been in the past adequately sustained by our Legislature; therefore, be it

"Resolved, That any fund contributed by the California Medical Association to the National Educational Fund be earmarked as restricted to non-land-grant schools of medicine located in California."

SPEAKER CHARNOCK: Is there a second to that?

A DELEGATE: Second.

SPEAKER CHARNOCK: It has been moved and seconded that money appropriated in this \$100,000 fund be earmarked for private schools in California. Is that correct, Dr. Dozier?

DR. DOZIER: Yes.

SPEAKER CHARNOCK: Is there any discussion to that?

DR. DOZIER: Mr. Speaker, under discussion might I simply point out to you that we have at the present time five medical schools in this state which are recognized as Class A schools. I, of course, am a graduate of Stanford Medical School, and as many of you know we have been having a very critically serious time in our medical school keeping it going the way we would like to have it going from the standpoint of finances. Stanford has carried on a campaign among its own graduates over the past two years or three years and we have now raised among our own graduates close to \$200,000. That is not all at once, of course, but total to date. For that, unless I am badly mistaken or misinformed, the National Education Fund has never taken cognizance and as a result of that California doctors stand today accused of contributing a very minimal amount of education, and as these funds have been broken down between the 74 or 78 medical schools in the country it means a really very small amount to each school.

As I understand further, the National Educational Fund doesn't make any great distinction between non-land-grant colleges or private colleges and land-grant colleges. Most of those of the latter have, as I pointed out, been fairly well taken care of by the Legislature. I don't mean in any sense to precipi-

tate any row between old rivals but I do think this House (laughter) could very well consider the applicability of these funds and where they best be spent.

SPEAKER CHARNOCK: Thank you, Dr. Dozier. (Applause.)

Dr. Cline wishes to speak on this resolution.

DR. CLINE: I do not rise to oppose this resolution. I wish to clarify certain points. The original principle of the American Medical Educational Foundation was that it would distribute its funds equally to all schools without any consideration as to need or as to their other means of financing. It did not desire to do so because it felt that there were schools which required more in the line of assistance than in others and certainly the private schools need that to a much greater extent.

More recently, if I am not mistaken, I am not a hundred per cent certain on this point and I wish you to understand that, I am not, but I believe I am correct that earmarked funds originally were simply assigned to that school by the donor but taken away—that other money was taken away from the general fund which might be available to the particular school to which it was assigned. I think that is no longer the case but now an assignment is a real assignment. All of the donations to medical schools are made through the National Fund for Medical Education which is an entirely different organization but which works very closely with the American Medical Educational Foundation. This is the organization which was the brain child of Ray Lyman Wilbur. It is headed as honorary chairman by Herbert Hoover.

President Eisenhower was an important factor in that organization before he became President of the United States. It is supported by industry and to date its contributions have been greater than those of the medical profession. I think that we should realize that the action taken today in appropriation of \$100,000 is a very sound action. I would say that if anything it is on the niggardly side.

The reason I say that is this, every man sitting in this room was educated partially at his own expense or that of his family, but to a much greater extent he was educated either by private philanthropy or the taxpayer. No one of us has ever, regardless of how much he has given to his own medical school, has ever contributed anything like the cost of his medical education to that school unless he has been an extremely unusual person. Our schools are in need. Whether Dr. Dozier's motion is wise or not, I think it is a matter for the House to decide. We are California doctors but there are many of the California doctors who are graduates of other medical schools. I think that they should be given some consideration in view of the fact that this money is being contributed equally by each member of the C.M.A., but I wish to correct just one or two items with reference to the contributions.

Originally we were unable to find out the money which was given directly to medical schools. Certain ones of them refused to divulge that information.

More recently they have seen the serious purpose and the real value of the American Medical Education Foundation and they have all, I believe as of the present time, agreed to and have reported the amount of money given by individual physicians directly to their schools, and I speak of this as an item of some shame because the total contribution in both categories was \$70,446 in 1953. I think that certainly is not a record of which the California physicians can be proud. Of that total \$54,000 odd dollars were contributed directly to the medical schools and about \$14,000 contributed through the American Medical Education Foundation.

Now I think that we have to consider lengthily what our responsibilities are in medical education. Dr. Grayson spoke at some length concerning what we were preparing for our successors. You have got to prepare the right basis of their succession. We have to realize that American medical education is the finest medical education which the world has ever known. We cannot allow it to slip from that high pedestal either because of lack of adequate support or domination by the Federal Government and I think that each one of you should consider ways and means in his own county society of increasing the voluntary contributions either directly or through the AMEF.

It doesn't matter so long as medical education gets those contributions, and I sincerely hope that you will encourage that effort because this is not a record of which California can be proud. And if you are unable to do so I think then it is thoroughly legitimate to consider that this Association might take appropriate action at some future time to insure that the doctors of this state do contribute their share to the institutions which gave them their educations and made it possible for them to be physicians.

SPEAKER CHARNOCK: Thank you, Dr. Cline. Is there any other discussion? Dr. Mauer.

DR. MAUER: This is a brief announcement. I think that this House of Delegates should know because it has received no publicity, that one of its members, the late Dr. Leo Levy, left the fortune of his family on his death a year or so ago. The estate was finally distributed in December of 1953 and he left somewhat in excess of \$450,000 to his medical school, Jefferson.

SPEAKER CHARNOCK: Thank you, Dr. Mauer. Is there any further discussion on Dr. Dozier's resolution?

A MEMBER: I know you all want to go home.

I too am a Stanford graduate and I am most interested in financial aid to perpetuate the finest school of medicine in the State of California. (Applause and laughter.) However, I see no point in making a very generous contribution of \$100,000 to the AMEF and take it out of one pocket and put it in one of our other pockets. I therefore oppose this resolution.

SPEAKER CHARNOCK: Any further discussion on this resolution? Dr. Daniels.

DR. DANIELS: Well, time is getting short certainly and we don't want to prolong this but a great deal of discussion took place on this item in the Council and it was felt—and for quite a little while many of us felt that it should be limited to the private schools in California. However, the suggestion came out that since Illinois has dues of \$20 a year tacked onto their state dues and just goes into the general fund, and other states have similar sums, though I can't exactly quote the other ones, but that is so about Illinois, that perhaps it might start a precedent if we instead of limiting the funds to the three private schools in California that this be appropriated to the private schools or the non-land-grant schools, whatever you wish to call them, of the United States with the thought that perhaps the other states may decide on giving contributions and might follow our example. Illinois perhaps might follow our example of limiting their donations to non-land-grant schools and not to the state supported institutions.

So I would like to amend this by striking out those last few words of Dr. Dozier's. I think just of the State of California would apply to the land-grant schools period—not of the State of California, the non-land-grant schools.

SPEAKER CHARNOCK: Is there a second?

A DELEGATE: Second.

SPEAKER CHARNOCK: There is a second to the amendment. Is there any discussion on the amendment, striking out the words "in the State of California" and making it applicable to all private schools within the United States of America?

A DELEGATE: Question.

SPEAKER CHARNOCK: Those in favor of the amendment will signify by saying "aye." To the contrary?

... There being no further discussion, the question was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: The amendment is passed. Now are you ready to vote upon the resolution as amended?

A DELEGATE: Question.

SPEAKER CHARNOCK: Those in favor of the resolution as amended will signify by saying "aye." To the contrary?

... There being no further discussion, the motion was put to a vote and it was carried. ...

SPEAKER CHARNOCK: It is passed.

At this time of the evening the only person who is on speaking terms with your new officers is Dr. Pete Green.

PRESIDENT GREEN: Mr. Speaker, members of the House: In coming to the microphone just now I just want to say two things or three very shortly. Firstly, I wish to thank all the members of this Association and all its officers, all the Board personnel and every person who in any way has contributed to the success of the administration. That includes our public relations officers who have done me a lot of good. I couldn't leave without saying

that. I am sorry that my term is over, there is much to be done.

At this time I should like to present to you Dr. Sidney J. Shipman, your President-Elect. Dr. Shipman of San Francisco! (Standing applause.)

DR. SHIPMAN: Thank you very much. I know that an incoming President or President-Elect can say nothing except that he will do his best. However, as retiring chairman of the Council I would like to say just one word in appreciation of those members of the Council who have served so loyally during the time that I have been serving. They have been a great bunch of fellows. It has been a real privilege to serve with them. The eastern medical politicians will never hold appropriate awe for me after knowing these members of the Council so well and the other members of the team. The staff have been uniformly kind and courteous during these years I have been chairman. I couldn't ask anything more from them.

Whenever I phoned Hap Hassard he laid down what he was doing and answered the phone, always helped me out, and Murph did the same thing, and Ben Read and the rest of the group that served with the C.M.A. It is a great team, fellows. Thank you. (Applause.)

PRESIDENT GREEN: The next person of your elected officers is Donald A. Charnock, whom you know. I just present him to you. Dr. Charnock, Speaker of the House! (Applause.)

SPEAKER CHARNOCK: Before the next meeting of the House we will finally resolve this argument, agendum versus agenda. Thank you. (Laughter.)

PRESIDENT GREEN: Thank you, Don.

Number three of your elected officers is a gentleman also from Los Angeles, Dr. Wilbur Bailey, your Vice-Speaker of the House. Dr. Bailey! (Applause.)

VICE-SPEAKER BAILEY: Thank you for your cooperation through thick and thin. (Laughter.)

PRESIDENT GREEN: And now, gentlemen, the man who assumes my mantle. Do you remember the old story years ago when we had Henry Rogers in here and somebody said, "Who are we going to elect to fill Henry Rogers' shoes?" Do you remember that? By golly, nobody could fill his shoes, they were so damn big! (Laughter.) But at this time I will turn my duties over to a gentleman that I know very well will do the job for you that you have chosen him to do, Dr. Morrison from Ventura, your President! (Standing applause.)

PRESIDENT MORRISON: Mr. Speaker: Last year, you remember, I took about one minute. This year I want to take just a few more.

I would like to say first that I too am sorry that Pete's term is expiring. It is nice now to get to the pleasant side of these things and so I would like to pass a few bouquets. First I would like to congratulate the House on your choice of the new President-Elect as I feel he is a very fine addition to the many illustrious men that we have had before your present Speaker. I would like to thank very much those county societies who have bulletins who have been

kind enough to send them to me. I think this is a very important thing for your officers and I have found them a valuable source of keeping up with what was going on over the scene.

Third, I would like to say a word about newspapers. In my travels over the state I have been treated very kindly by the newspapers as a matter of straight reporting. Despite all of the adverse publicity in national magazines et cetera I feel that bringing newspaper articles—they are beginning to give way to better understanding. I feel that many writers are accepting what I consider to be their moral responsibility in attempting to learn more about the problems in this field, and as they are doing a better job of reporting, as for example the recent affair in Los Angeles where there was some question about the type of cancer treatment. Which should be given?

Then I would like to repeat one thing that I have been saying in county societies and one thing which the doctor before me said who was out here, and that is to urge every doctor not only in this House but in the state to take a more active part in community affairs because that pays us great dividends in understanding, and I think also takes care of a very definite need in a service that we can render to the public. And also, I can assure you that the public appreciates it.

I would like to cite just one more example. In so citing I do not wish to disparage in any way the works of the chairmen of our committees who have spent so many hours, but just recently, whether you know it or not, Henry Randel, chairman of our World Health Committee, was cited by the State P.-T.A. for the service of that committee. I am sure that Henry would be the first to tell you that he accepts that for all his committee members.

Now, in closing I think that we must continue to look forward, I think the thing we must do is to stress these positive policies which we sponsor for the good that will pay us the greatest dividends, and in closing I would again like to assure you that it is the earnest desire of our officers, and I know it is of the Councilors, to do what we feel is best for California medicine, and I can assure you that the thing uppermost in our minds is what is good for California medicine in all of our deliberations. Thank you. (Applause.)

SPEAKER CHARNOCK: At this time we will call upon Dr. Lewis Alesen, most recent Past President, to present Dr. Green's certificate for retiring President.

DR. ALESEN: Mr. Speaker: And Dr. Green, would you please come up here? It has been quite aptly said that there is nothing quite as dead as last summer's Romans. Also, to go along with that I would suggest we classify past presidents. However, there is some reason for hope because of this age of hormones, even Romans have been revived and continue to live on past the age of one hundred years. (Laughter.) So we may therefore give some hope to retiring past presidents.

John, you have done a wonderful job as President during the past year. We have known you over the years and have followed you throughout the Council, its various activities. I have been proud and happy to have been part of your work, to have known you.

However long I have been associated with you I have always found you to be a true friend of medicine. You have been a scientist, a scholar, a real scientific minded individual.

On behalf of the world's best and greatest and best known medical association, the California Medical Association, I want to give you this little plaque.

"Presented to John W. Green, M.D., in appreciation of his services as President, 1954."

... The plaque was presented to Past President Green. ...

(Standing applause.)

SPEAKER CHARNOCK: The Chair would like a motion for approval of the Minutes of the Committee.

A DELEGATE: So moved.

SPEAKER CHARNOCK: Everybody in favor signify by saying "aye." To the contrary?

... There being no discussion, the motion was put to a vote and it was unanimously carried. ...

SPEAKER CHARNOCK: Is there any further business to come before this House of Delegates?

A DELEGATE: Move we adjourn.

SPEAKER CHARNOCK: The Chair will entertain a motion for adjournment.

A DELEGATE: So moved.

SPEAKER CHARNOCK: All in favor go home.

... The meeting adjourned at 6:05 p.m. ...

In Memoriam

BENNING, HENRY M. Died in Santa Barbara, June 19, 1954, aged 50. Graduate of Columbia University College of Physicians and Surgeons, New York, 1929. Licensed in California in 1943. Doctor Benning was a retired member of the Santa Barbara County Medical Society, and the California Medical Association.



BOYD, ROBERT T. Died in San Francisco, May 6, 1954, aged 57. Graduate of the University of California Medical School, Berkeley-San Francisco, 1926. Licensed in California in 1926. Doctor Boyd was a member of the San Francisco Medical Society.



BRULL, ALADAR. Died October 17, 1953, aged 63. Graduate of Magyar Királyi Pázmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest, Hungary, 1913. Licensed in California in 1935. Doctor Brull was a member of the Los Angeles County Medical Association.



CLEMONS, E. JAY. Died in Los Angeles, June 22, 1954, aged 76. Graduate of the University of Illinois College of Medicine, Chicago, 1902. Licensed in California in 1913. Doctor Clemons was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an associate member of the American Medical Association.



CONZELMANN, FRED J. Died in Stockton, June 26, 1954, aged 78, of coronary artery disease. Graduate of the University of Michigan Medical School, Ann Arbor, 1905. Licensed in California in 1912. Doctor Conzelmann was a member of the San Joaquin County Medical Society.



COSGROVE, CLAIR P. Died in Los Angeles, June 29, 1954, aged 50. Graduate of Northwestern University Medical School, Chicago, Illinois, 1931. Licensed in California in 1931. Doctor Cosgrove was a member of the Los Angeles County Medical Association.



COX, EDWARD R. Died in Coalinga, June 8, 1954, aged 60, of coronary occlusion. Graduate of the College of Physicians and Surgeons, Los Angeles, 1917. Licensed in California in 1917. Doctor Cox was a member of the Fresno County Medical Society.



DOYLE, LEO W., JR. Died in Berkeley, June 28, 1954, aged 36, of acute hemorrhagic pancreatitis due to chronic pancreatitis. Graduate of Northwestern University Medical School, Chicago, Illinois, 1943. Licensed in California in 1945. Doctor Doyle was a member of the Alameda-Contra Costa Medical Association.

EBRIGHT, GEORGE E. Died in San Francisco, June 26, 1954, aged 81, of coronary artery disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1899. Licensed in California in 1899. Doctor Ebright was a member of the San Francisco Medical Society.



MCCARTHY, F. JUSTIN. Died in San Francisco, June 17, 1954, aged 67. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1915. Licensed in California in 1915. Doctor McCarthy was a member of the San Francisco Medical Society.



MAHAN, LILLIAN G. BULLOCK. Died in El Cajon, March 27, 1954, aged 86, of chronic myocarditis. Graduate of the Eclectic Medical College of the City of New York, New York, 1895. Licensed in California in 1921. Doctor Mahan was a retired member of the San Diego County Medical Society, and the California Medical Association.



REMMEL, ALVA J. Died in San Francisco, April 30, 1954, aged 78. Graduate of the Cooper Medical College, San Francisco, 1905. Licensed in California in 1905. Doctor Remmel was a member of the San Francisco Medical Society.



SHAFFER, CARL J. Died in Huntington Park, May 29, 1954, aged 82. Graduate of the State University of Iowa College of Medicine, Iowa City, 1903. Licensed in California in 1917. Doctor Shaffer was a member of the Los Angeles County Medical Association.



SHAPIRO, NEWTON H. Died in San Francisco, June 20, 1954, aged 47, of coronary artery disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1932. Licensed in California in 1932. Doctor Shapiro was a member of the San Francisco Medical Society.



WELFIELD, SAMUEL E. Died in San Francisco, June 28, 1954, aged 65. Graduate of the College of Physicians and Surgeons of San Francisco, 1918. Licensed in California in 1918. Doctor Welfield was a member of the San Francisco Medical Society.



WHEELIS, JOHN M., JR. Died recently, aged 48. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1932. Licensed in California in 1934. Doctor Wheelis was a member of the Los Angeles County Medical Association.



WILEY, HARRY J. Died in Huntington Park, June 10, 1954, aged 72, of coronary artery disease. Graduate of the University Medical College of Kansas City, Missouri, 1904. Licensed in California in 1915. Doctor Wiley was a member of the Los Angeles County Medical Association.

CALIFORNIA MEDICAL ASSOCIATION

Annual Meeting

SAN FRANCISCO

May 1-5, 1955

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) not later than November 20, 1954.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association not later than December 1, 1954. (No exhibit shown in 1954, and no individual who had an exhibit at the 1954 session, will be eligible until 1956.)

SCIENTIFIC PAPERS

SCIENTIFIC EXHIBITS

PLANNING MAKES PERFECT

AN EARLY START HELPS

SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY Ben C. Eisenberg
2680 Saturn Avenue, Huntington Park

ANESTHESIOLOGY John P. Howard
2558 4th Avenue, San Diego 3

DERMATOLOGY AND SYPHILOLOGY . R. Raymond Allington
3115 Webster Street, Oakland 9

EYE, EAR, NOSE AND THROAT—

ENT Francis A. Sooy (Chairman)
490 Post Street, San Francisco 2

EYE Robert N. Shaffer
490 Post Street, San Francisco 2

GENERAL MEDICINE Roger O. Egeberg
Wadsworth General Hospital, Los Angeles 25

GENERAL PRACTICE Stanley R. Parkinson
326 G Street, Marysville

GENERAL SURGERY Lyman A. Brewer, III
2010 Wilshire Boulevard, Los Angeles 57

INDUSTRIAL MEDICINE AND
SURGERY Homer S. Elmquist (Asst. Secretary)
629 S. Westlake, Los Angeles 57

OBSTETRICS AND GYNECOLOGY George Judd
2010 Wilshire Boulevard, Los Angeles 57

PATHOLOGY AND BACTERIOLOGY . . . Orlyn B. Pratt
312 North Boyle Avenue, Los Angeles 33

PEDIATRICS Milo B. Brooks
1015 Gayley Avenue, Los Angeles 24

PSYCHIATRY AND NEUROLOGY Knox H. Finley
450 Sutter Street, San Francisco 8

PUBLIC HEALTH E. M. Bingham
130 South American, Stockton

RADIOLOGY Merrell A. Sisson
450 Sutter Street, San Francisco 8

UROLOGY Wilson Stegeman
1166 Montgomery Drive, Santa Rosa



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

MORE HONORS FOR CALIFORNIA

Californians continue to hold high offices in our National Auxiliary. At the Convention in June, Mrs. Carl Burkland of Sacramento, immediate past state president, was elected Constitutional Secretary of the Woman's Auxiliary to the American Medical Association. Mrs. Raymond Wayland of San Jose, also a past state president, is serving her second year as a member of the Board of Directors, and she was also elected to the Nominating Committee.

Two of our national presidents have been Californians: Mrs. James Fulton Percy of Los Angeles served in 1932-33, and Mrs. Ralph B. Eusden of Long Beach, 1952-53. Two other national presidents have subsequently become Californians by adoption: Mrs. George H. Hoxie of Missouri now lives in Berkeley, and Mrs. Rollo K. Packard of Illinois has made Sherman Oaks her home. Mrs. Arthur Nies of Orange has just completed two terms of very capable service as National Parliamentarian.

* * *

NURSE RECRUITMENT IS OUR MAJOR PROJECT

Another honor came to California at the recent Convention, with the appointment of Mrs. Leonard Offield of San Mateo as Western Regional chairman of Nurse Recruitment. Mrs. Offield is serving her third term as state chairman of this very important activity. During the past year, \$16,422.25 was supplied in loans and given in scholarships to student nurses by our county Auxiliaries. Our overall program of nurse recruitment, since its inception in 1949, has helped 337 young women to enter training, with loans and scholarships totalling \$55,166.

Many counties also sponsor Future Nurses' Clubs, which help the students to become familiar with the profession before actually entering training. Other projects include hospital tours, panel programs, and the showing of films on nursing to junior and senior high schools throughout the state.

* * *

6,000 HANDSOME BACHELORS?

The California Medical Association has about 12,000 members in 40 county medical societies; your Auxiliary has 5,583 members in 31 county auxiliaries. We know that many of those M.D.'s are women—but there must be nearly 6,000 handsome, eligible bachelors in the C.M.A. Surely we don't have that many married doctors whose wives aren't availing themselves of the privilege of becoming members of the Auxiliary! The picture is much the same on the national level—140,000 members in the A.M.A. and 66,000

in the Auxiliary. With your help, we could nearly double our membership.

* * *

IS TODAY'S HEALTH IN YOUR WAITING ROOM?

If it is, you belong to an exclusive minority; only 15 per cent of our physicians subscribe to *Today's Health*, yet it is the only nationally distributed health magazine officially sponsored by the medical profession. It was established by the American Medical Association in 1923, as *Hygeia*, and became *Today's Health* in March 1950.

The first request that the A.M.A. made of the Auxiliary, back in 1931, was that we further the sales of *Hygeia*. Since then, this has been one of our major projects, because we know this is one way of winning more and more friends for medicine. Positive health education means good public relations. Written in layman's language, *Today's Health* states with authority what may be expected from the various new drugs and new medical treatments, outlines new surgical procedures to prolong life, and exposes medical quackery and old superstitions. Such a magazine instills confidence in the medical profession, alleviates fear of prescribed treatment, and generally inspires greater cooperation between the patient and physician.

May we respectfully suggest *Today's Health* as a weapon to combat forces that are inimical to organized medicine—the quacks, the charlatans, the malcontents and professional do-gooders in the government, the socializers and bureaucrats who rely on public ignorance and public apathy as their best allies.

Under the direction of Mrs. Everett Stone of Riverside, State Chairman, our Auxiliary sold 2,400 subscriptions last year, including 473 gift subscriptions to schools, libraries, beauty parlors and other public places. We anticipate another year of progress under the chairmanship of Mrs. Samuel Gendel of Fullerton.

Incidentally, doctors, the subscription price is only \$1.50 per year instead of the regular \$3.00, if you subscribe through an Auxiliary member. Let's surprise the A.M.A. by raising that 15 per cent they quote, to 100 per cent in California! With your cooperation we can do it.

MRS. FREDERICK J. MILLER, *President*

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

The sixth annual postgraduate assembly of Saint John's Hospital, Santa Monica, will be held September 13, 14 and 15 at the Elk's Club in Santa Monica.

Guest lecturers from outside the state who are to appear on the program are: Emory D. Warner, M.D., professor of pathology, State University of Iowa College of Medicine; Philip J. Hodes, M.D., professor of radiology, University of Pennsylvania Medical School; Robert McNair Mitchell, M.D., associate in gynecology and obstetrics, Post-Graduate School, University of Pennsylvania; Frederick A. Collier, M.D., professor of surgery, University of Michigan School of Medicine; and Charles F. Wilkinson, Jr., M.D., professor of medicine, Post-Graduate Medical School, New York University.

Registration fee for the course is \$10. Members of the armed forces, residents, interns and medical students will be admitted without fee. Inquiries may be addressed to John C. Egan, M.D., director of the assembly, St. John's Hospital, Santa Monica.

* * *

A \$30,000 student loan fund has been presented to the University of Southern California School of Medicine by the K. Arakelian Foundation of Fresno, California, it was announced recently by Dr. Gordon E. Goodhart, dean. The fund will be available to students who need financial assistance to complete their education. The repayment of loans will make the Arakelian fund self-perpetuating. Arrangements for the School of Medicine to receive the grant were made by Dr. H. M. Ginsburg of Fresno and George A. Emersian, president of the Arakelian Foundation.

SAN FRANCISCO

Dr. John O. Haman of San Francisco was elected president of the American Society for the Study of Sterility at the tenth annual conference of the organization that was held in San Francisco immediately prior to the American Medical Association convention.

At the same meeting the national organization gave official recognition to the Western Section of the American Society for the Study of Sterility.

The latter organization held a scientific meeting in Palm Springs last December which had an attendance of 200. Dr. Sheldon Payne of Los Angeles, president of the Western Section, announced that annual meetings devoted to infertility studies will be held by this group each winter in the west. Membership is open to all those in the western states interested in infertility. Application to the Western Section may be made to Dr. M. James Whitelaw, Stonestown Medical Center, San Francisco.

* * *

Five distinguished physicians from other countries will be guest speakers at the 25th annual postgraduate symposium on heart disease to be held October 6, 7, 8, 1954, at

Larkin Hall in the San Francisco Civic Auditorium. They are Viking Olaf Bjork of Stockholm, Sir Russell C. Brock, London; Drs. Pedro Cossio and Manuel Rene Malenow, of Buenos Aires, and Dr. Horace Smirk of New Zealand.

Five Northern California Heart Associations will cooperate with the San Francisco Heart Association to present the program. They are the Alameda County Heart Association, Marin County Heart Association, Monterey County Heart Association, Santa Clara Heart Association and the San Mateo County Heart Association.

Registrations may be made through the San Francisco Heart Association, 604 Mission Street, San Francisco.

* * *

The California Division of the American Cancer Society will have a cancer conference Friday, October 1, 1954, between 2 and 5 p.m., at the Palace Hotel, San Francisco. E. M. Butt, M.D., will be chairman, and the topics and the speakers who will discuss them are as follows:

1. Recent Advances in Chemotherapy—Byron Hall, M.D., San Francisco.
2. Super-Voltage in Cancer Therapy:
 - (a) Theories and Advantage of Multimillion Voltage Therapy—Robert S. Stone, M.D., San Francisco.
 - (b) Results of the Use of Million-Volt Therapy—Charles Elbert Grayson, Sacramento.
3. Evaluation of Various Cytological Techniques—H. S. Aijian, M.D., Los Angeles.
4. Advantages and Limitations of Radical Surgery in the Treatment of Cancer—Ian Macdonald, M.D., Los Angeles.
5. Present Status of Serodiagnostic Procedures for Cancer—Justin J. Stein, M.D., and Andrew H. Dowdy, M.D., Los Angeles.

* * *

A training program for personnel concerned with the care of children with cerebral palsy, under the direction of Dr. Luigi Luzzatti will begin at Children's Hospital, San Francisco, next September. It was made possible by a grant of \$21,368 received by the hospital from the United Cerebral Palsy Associations, the hospital announced. For the coming academic year funds are available for a maximum of six students. There will be two courses of five months' duration beginning on September 1, 1954, and February 1, 1955. Students will receive a stipend of \$750 during their training program.

* * *

Appointment of Dr. David A. Rytand as acting executive head of the department of medicine at Stanford University School of Medicine, effective September 1, was announced recently. Dr. Rytand will succeed Dr. Arthur L. Bloomfield, who will become emeritus professor of medicine.

Also announced was the appointment of Dr. Phillip Hunt Wells as associate dean of the school of medicine in charge of school development. His principal duty, it was said, will be to give administrative assistance to four committees formulating plans for the consolidation of medical school facilities on the campus at Palo Alto.

* * *

At the recent meeting of the American Medical Association in San Francisco Dr. Edward C. Sewall, formerly professor of otolaryngology at Stanford University School of Medicine, who has been retired for several years, was called upon to be the honorary chairman of the Section in Otolaryngology and Rhinology.

Three members of the faculty of the University of California School of Medicine, San Francisco, retired July 1. They are Dr. Karl F. Meyer, director of the Hooper Foundation; Dr. Robert Wartenberg, clinical professor of neurology, and Dr. Michael Hobmaier, associate professor of comparative pathology.

STANISLAUS

A new elementary school in Turlock is to bear the name of two of the town's family physicians who were chosen for the honor in recognition that they have "given unstintingly of their time . . . to help others." They are Doctors Albert and Eric Julien, 73 and 71 years of age, respectively, who still are in active practice.

In a contest to select a name for the school, their name was placed in nomination by Mrs. Wilbur F. Trent, who said, "I feel they should be honored while they are among us, not at some future date."

GENERAL

The second annual meeting of Bureaus of Medical Economics sponsored by county medical societies was held concurrently with the C.M.A. session in Los Angeles in May. Representing their respective bureaus were Mr. and Mrs. Joseph Donovan, Santa Clara; Mr. C. A. Catassi, Alameda-Contra Costa; Mr. John Carnes, San Diego; Mr. Boyd Thompson, San Joaquin; Mr. Bob Williams, Orange; and Mr. Walter F. Dickey, managing director of San Francisco's Society-sponsored bureau.

Discussion of mutual problems and exchange of information featured the two-day session. The directors of the bureaus concluded their meeting with a motion that C.M.A. be requested to include the yearly meeting of the bureaus on its official program so that interested physicians can plan to attend.

* * *

The American Urological Association has announced the opening of competition for its annual award of \$1,000 (first prize of \$500, second prize \$300, and third prize \$200) for essays on the result of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been graduated not more than ten years, and to men in training to become urologists. The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Biltmore Hotel, Los Angeles, May 16-19, 1955.

Full particulars may be obtained from the executive secretary of the association, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before January 1, 1955.

* * *

The 14th annual Japan Medical Congress will be held at Kyoto, Japan, May 1-5, 1955.

* * *

Recently a new improvised hospital for civil defense purposes was put on display in Washington, D.C. It is a 200-bed unit, but may be used as a nucleus for much greater expansion. It may be set up so that there will be a triage room, shock treatment room, three operating rooms, x-ray and film developing facilities, laboratory and pharmacy. The equipment also lists instruments, cots, linen, drugs, auxiliary power units, etc. It is completely mobile, weighs approximately 13 tons packed, occupies 2,000 cu. ft. storage space and can be transported in one large van. It is esti-

mated that it can be set up in a school or other suitable building by 30 reasonably well-trained persons in four to five hours.

Twenty of these units are now on procurement by the State of California Office of Civil Defense. It is planned that these units will be stored near the critical target areas, but well outside the danger zones, the Civil Defense Office announced.

* * *

Awards totaling \$55,650 for support of research on diseases of the heart and arteries were made recently to four California institutions by the Life Insurance Medical Research Fund. The awards were as follows:

Mount Zion Hospital, San Francisco, for research by Dr. Ray H. Rosenman on the role of potassium in maintenance of the blood pressure, \$8,250.

Stanford University School of Medicine, San Francisco, for research by Dr. Emile Holman on cardiovascular disorders in relation to their surgical treatment, \$12,200.

University of California School of Medicine, Berkeley, for research by Dr. I. L. Chaikoff on the development and prevention of arteriosclerosis, \$26,400.

University of California School of Medicine, Los Angeles, for research by Dr. William G. Clark on neurochemical aspects of hypertension, \$8,800.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Three-day Symposium in San Diego: Highlights of Clinical Endocrinology, July 28; Use of Physical Medicine in General Practice, August 4; Problems in Anesthesia, August 11.

Fall Schedule:

Surgical Anatomy—September 8 to November 10, Wednesday evenings.

Fundamental Principles of Radioactivity—September 16, 1954, to July 7, 1955, Thursday evenings.

Evening Medical Lecture Series—September 27 to December 13, Monday evenings.

Dermal-Abrasives-Planing Techniques—September 29 to November 3, Wednesdays.

Three-Day Symposium in Riverside: Highlights of Endocrinology, October 13; Anesthesia, October 20; Peripheral Vascular Diseases, October 27.

Anesthesiology—November 4 to 5.

Dermatology—November 10 to December 15, Wednesdays.

Contact: Mrs. Margaret H. Griffith, Assistant Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Conference on General Surgery

Date: September 13 through 17, all day, at Medical Center. This conference will be offered for the purpose of stressing the newer concepts, methods of diag-

nosis, treatment and techniques in surgery. Throughout the session emphasis will be placed on the diagnosis and treatment of malignant lesions. Instruction will consist of didactic periods, panel discussions, and actual operative demonstrations which will be televised from the operating room to the lecture hall. This program will be designed for general practitioners who are doing surgery. The class will be limited.

Conference on Fractures and Diseases of the Bone

Date: September 20 through 23, all day, San Francisco County Hospital. The program will cover the newer concepts, methods of diagnosis, treatment and techniques. There will be didactic lectures, panel discussions, and actual demonstrations of illustrative cases. The class will be limited.

Medicine for General Practitioners

Date: September 21 to December 7, Tuesday evenings, East Oakland Hospital, Oakland. This is a continuation course which is offered every year, with complete change of program and speakers. Class limited.

Evening Lectures in Medicine, Part I and Part 2

Date: September 16 through December 9, Thursday evenings, Mills Memorial Hospital, San Mateo. This is also a continuation course which will be of interest to both internists (Part 1) and to physicians in general practice (Part 2).

Symposium on Endocrine Diseases and Geriatrics

Date: October 22, 23, 24 (week-end), University of California Extension Building, 540 Powell Street, San Francisco. A review of recent developments in both fields, with suggestions for the management of patients past the age of fifty.

Contact: Stacy R. Mettler, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22, California.

UNIVERSITY OF SOUTHERN CALIFORNIA

Dermatology and Syphilology—Beginning September 13, 1954. Fee: \$1,000.

This is a full-time course of twelve-month duration, carries thirty-two units credit toward the graduate degree of Master of Science, and is accredited by the American Board of Dermatology and Syphilology. It is designed for physicians who plan to take the examination for certification by the Board. Dr. Maximilian E. Obermayer is the course director. The course is presented only every third year and open to not more than twelve qualified physicians.

Intensive Review of Internal Medicine, Course No. 855—September 20 to October 1, 1954. Fee: \$50.00.

This course is designed primarily for students planning to take the examination of the American Board of Internal Medicine. Forty hours of didactic lectures, 8:00 a.m. to 12:30 p.m., Monday through Friday. It will cover the fields of Cardiology, Endocrinology, Gastroenterology, Hematology, Infectious Diseases, Renal Diseases, Arthritis, Nutrition, Neurology, and Isotopes. Enrollment limited to 50 students, applications accepted to August 15. Course director is Donald W. Petit, M.D. Gastroenterology, No. 844, beginning September 20, 1954, one year, full time. This is a full time course designed to give a limited number of qualified physicians advanced training in this field. Didactic courses will include intensive study of physiology and pathology

as well as the clinical aspects of the diseases of the digestive tract. Clinical teaching will be done in the out-patient department and on the wards of the Los Angeles County Hospital. Emphasis will be placed on the clinical approach using such diagnostic aids as sigmoidoscopy, peritoneoscopy and gastroscopy as indicated. Opportunities will be available to observe fluoroscopic examination, as well as the interpretation of the x-rays of each case. Director, George K. Wharton, M.D.

Contact: Robert S. Cleland, M.D., director, Medical Extension Education, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33, California.

Medical Dates Bulletin

THIS BULLETIN of the dates of postgraduate education assemblies and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: C. A. Broadus, M.D., 1036 North Center Street, Stockton 3, California.

SEPTEMBER

Sixth Annual Postgraduate Assembly, St. John's Hospital, September 13, 14, 15, 1954, John C. Eagan, M.D., Director, 1328 22nd Street, Santa Monica.

Tulare County Annual Postgraduate Meeting, Visalia, September 19, 1954, George D. Lavers, M.D., 204 North L Street, Tulare.

OCTOBER

American Cancer Society, California Division, Cancer Conference, Palace Hotel, San Francisco, October 1, 1954—2:00-5:00 p.m.

California Society of Internal Medicine, Yosemite National Park, October 2, Walter Beckh, M.D., 384 Post Street, Suite 603, San Francisco 8.

San Francisco Heart Association, 25th Annual Postgraduate Symposium on Heart Disease, October 6-7-8, Gladys Taylor Daniloff, 604 Mission Street, San Francisco 5.

Los Angeles County Heart Association, Annual Professional Symposium on Heart Disease, October 13-14, Mr. Robert Pike, executive director, 316 S. Bonnie Brae, Los Angeles.

San Diego County Heart Association, Annual Professional Symposium on Heart Disease, Friday, October 15, H. Jack Hardy, executive director, 1651 Fourth Avenue, San Diego 1.

California Academy of General Practice, Sixth Annual Scientific Assembly, Los Angeles, October 24, 25, 26, 27, Wm. W. Rogers, executive secretary, 461 Market Street, San Francisco.

NOVEMBER

Los Angeles Urologic Research Convention, Los Angeles, November 8-12.

JANUARY

American College of Surgeons, Palm Springs, January 21-22, 1955.

CALIFORNIA MEDICAL ASSOCIATION, Annual Session, San Francisco, May 1-5, 1955.

AMERICAN MEDICAL ASSOCIATION

Clinical Session, 1954, Miami, November 30-December 3.

Annual Session, 1955, Atlantic City, June 6-10.

Clinical Session, 1955, Boston, November 29-December 2.



THE PHYSICIAN'S *Bookshelf*

RH-HR BLOOD TYPES—Applications in Clinical and Legal Medicine and Anthropology—Selected Articles in Immuno-hematology. Alexander S. Wiener, M.D., F.A.C.P., Senior Serologist, New York City; Assistant Professor in the Department of Forensic Medicine, New York University. Grune & Stratton, New York, 1954. 763 pages. \$11.50.

In this volume the author dedicates a memorial to himself. The book is a collection of reprints of works by Dr. Wiener and his colleagues covering the period since 1940. As such, it provides an interesting view of the development of the field of blood grouping, its applications and other implications. The material covered is not as limited as the title would imply; and subjects covered include ABO incompatibility in pregnancy, the origin of the hemagglutinins, autoimmune disease, and material as fundamental as the origin of antibodies. But a volume of collected papers is of necessity limited in its scope. Dr. Wiener's book is all the more limited because of the author's violently partisan approach to the field of Rh. He has long been engaged with the British investigators in a controversy over terminology and the concept of linked versus independent gene pairs; and many of the frays and sorties receive lively treatment in a one-sided fashion. The result is often amusing, but sometimes can hardly be classified as instructive.

Fortunately the papers are arranged by subject, rather than chronologically. Much of the material is of considerable practical value to the practicing physician and clinical pathologist. Of especial interest is the section of the medico-legal aspects of blood typing and its application to disputed parentage; but here again, the use of collected papers is detrimental to optimal organization and clarity. A much more satisfactory work would have resulted had Dr. Wiener revised and enlarged his excellent monograph, "Blood Groups and Transfusions." In its present form this book is of interest mainly to workers in the blood grouping field who want a handy reference to Wiener's work, and to medical historians.

* * *

CLINICAL ORTHOPTIC PROCEDURE—Second Edition—A Reference Book on Clinical Methods of Orthoptics. William Smith, O.D., Associate Instructor in Optometry and Instructor of Orthoptics and Visual Training, Massachusetts College of Optometry, Boston. The C. V. Mosby Company, 1954. 523 pages, 91 illustrations, \$10.00.

This is the second edition of a book reviewed in 1950. In the second edition obvious errors have been corrected and there have been some additions made to the text. It is true that several chapters have been completely rewritten and some outstanding ophthalmologists have been quoted. However, it still remains a confusing book that would seem to be of no help to the ophthalmologist, who has better and more accurate texts available.

As far as the book itself is concerned, it is easily readable, the illustrations are well printed, and in general the book comes up to the usual Mosby standards.

PRACTICAL ELECTROCARDIOGRAPHY. Henry J. L. Marriott, M.D., Associate Professor of Medicine, University of Maryland. The Williams and Wilkins Company, 1954. 171 pages, \$5.00.

Patently designed for the neophyte, this volume stands out among the recent avalanche of primers on electrocardiography. In a superior manner the author has met his prefatory commitment to prepare a text that "deals with the subject quickly and simply and yet is sufficiently comprehensive." Aware of the truism that biologic values do not submit to arithmetical exactitude, he wisely excludes all measurements, tables and formulae so frequently purported to represent arbitrary limits of normal. The material is presented in a clear and concise manner that will appeal to the reader who is not especially well versed in electro-dynamics.

The genesis of the various electrocardiographic deflections is lucidly stated and is followed by an explanation of the phenomenon of cardiac rotation and the significance of the transitional zone that is remarkable in its clarity. The chapter on auricular arrhythmias emphasizes the unitary concept rather than that of circus motion. In the section on conduction defects no attempt is made to differentiate between complete A-V heart block and A-V dissociation and the terms are unfortunately used synonymously.

The patterns caused by myocardial infarction are well illustrated both as to the injury phenomena and for localization with the appropriate comment that clinically it is more important to know that an infarction has occurred than it is to speculate as to its probable site. The chapter on miscellaneous conditions includes brief descriptions of tracings associated with valvular lesions, drug effects, electrolyte disturbances and cor pulmonale.

Generally the volume is an outstanding example of simplicity that is rarely found in current offerings on electrocardiography and as such should be eagerly accepted by medical students, general practitioners and others seeking an understanding of this valuable—albeit not infallible—diagnostic discipline.

* * *

AN RH-HR SYLLABUS—The Types and Their Applications. Alexander S. Wiener, M.D., F.A.C.P., F.C.A.P., Senior Bacteriologist (Serology), New York City; Assistant Professor, Department of Forensic Medicine, New York University. Grune & Stratton, New York, 1954. 82 pages, \$3.75.

In condensed syllabus form Dr. Wiener attempts to initiate the beginner into the intricacies of the Rh field. The initiation is highly Platonic, consisting mainly of a presentation of concepts. No attempt is made to provide a manual of methods. In the traditional Wiener manner the approach is completely partisan. When the "CDE" terminology is covered, it is with scorn only. The result is a work which is too superficial for the specialist and has insufficient perspective for the beginner.

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(Continued from Front Advertising Section, Page 46)

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Dr. Naide is a staff member of the Hospital of the University of Pennsylvania, the vascular clinics of the Woman's Medical College of Pennsylvania and the Einstein Medical Center, Southern Division.

Alcohol, Personality Disorders Cause Pancreatic Condition

Alcoholism and personality disorders are believed to be causative factors in chronic relapsing pancreatitis, a serious inflammation of the pancreas, it was reported in a recent issue of *Internal Medicine*, published by the American Medical Association.

Twenty-eight cases of chronic relapsing pancreatitis observed during a three-year period were described by Dr. Arthur M. Phillips, Providence, R. I. Nineteen (68 per cent) of the patients were chronic alcoholics, and in many the onset of the attacks

(Continued on Page 68)



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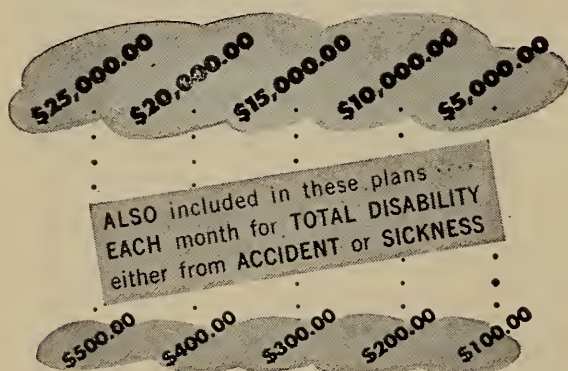
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Mealtimes should be pleasant times as meals are very near the heart of our physiological and social life. Dr. Frederic T. Jung, a Chicago physiologist, wrote in a recent issue of *Today's Health* magazine, published by the American Medical Association.

"Mealtimes should not be misused for the reporting of symptoms, the airing of grievances, or the transaction of disagreeable business," he stated.

"The dryness of the mouth during anger or fright is a well-known phenomenon. Physiologists have found experimental methods for measuring the increase in the rate of secretion of saliva when food is being enjoyed, and have been able to show that the secretion of digestive juices in the stomach is affected in the same way. It pays to have an atmosphere of security and quiet at mealtime.

"Contentment favors normal digestion both through the action of the autonomic nervous system and through the operation of various hormones. For other than family meals, it pays to find companions who relish their food and enjoy each other's company. Sometimes, it is better to eat alone in peace than to sit where one must listen to the complaints of dyspeptics about their food."

Among the curiosities of human behavior are the peculiarities of appetite, Dr. Jung pointed out. Foods taste and smell different to different people. The appetite is a wonderful thing, but its peculiarities can make or break a person.

Many food idiosyncrasies stem from childhood experiences, he said, adding that lopsided eating habits must be recognized and corrected both for health and social reasons. Lack of proper foods and too much of certain types of foods can cause serious diseases and physiological disturbances. What is more, Dr. Jung said, people who do not eat anything but a limited repertory of food can drive their families and friends to despair.

"A simple remedy for excesses and deficiencies alike is to eat a varied diet," Dr. Jung concluded. "The fact that our foods come from so many different parts of the earth must be one reason for the magnificent growth of young people today."

Dr. Jung is the director of the A.M.A.'s physical laboratory.

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Alcohol, Personality Disorders Cause Pancreatic Condition

(Continued from Page 56)

promptly followed the intake of alcohol, he said. Of the nine patients not classified as chronic alcoholics, four admitted to drinking in moderation. In addition, there was a high incidence of personality disorders in the group.

The patients, all men, ranged in age from 27 to 74 years, with the majority of cases (71.5 per cent) occurring in the age group of 30 to 50 years, Dr. Phillips stated. Symptoms, which varied in duration from nine hours to 22 years, included upper

abdominal pains, nausea, vomiting, weight loss, and diarrhea. The frequency of attacks ranged from daily to less than one a year, with most of the patients noting three to four attacks a year.

Treatment of chronic relapsing pancreatitis, according to Dr. Phillips, can be divided into medical and surgical methods. Medical measures are concerned with the management of the acute attack, an attempt to replace any deficient pancreatic secretions, an effort to eliminate any known cause for the attacks, and drug therapy. Surgical measures are indicated for treatment of many of the complications of the inflammatory processes, he added.

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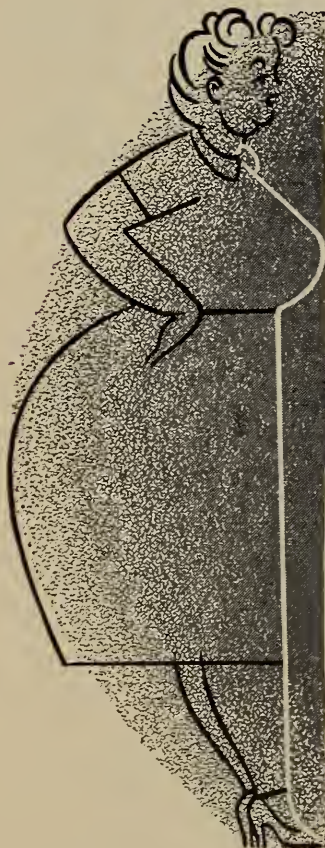
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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236: 536, 1948.
2. Cushney, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.



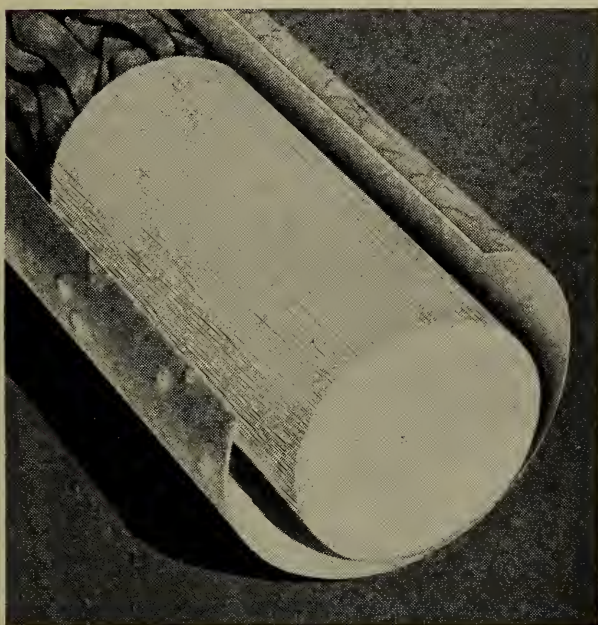
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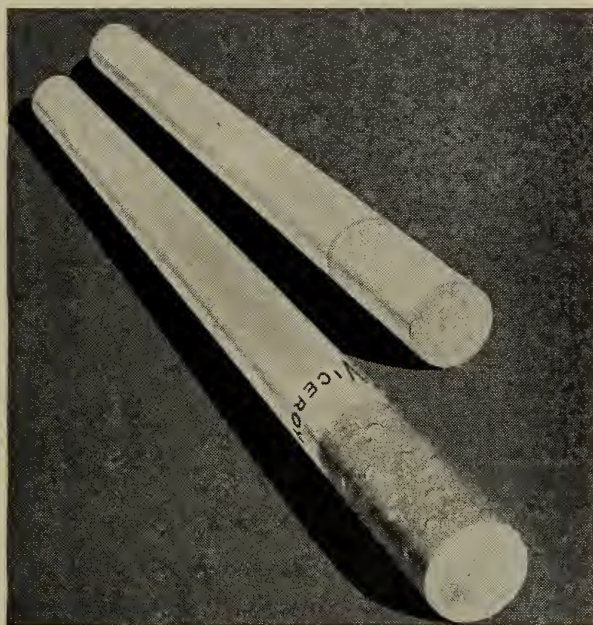


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Breathing Exercises Aid in Helping Persons Stop Smoking

Exercises which teach heavy smokers proper breathing when not smoking may help them stop smoking, according to Dr. William Kaufman, Bridgeport, Conn.

"Many heavy smokers find it impossible to give up smoking for more than a day or so, even though they realize that smoking causes their unpleasant or even alarming cardiovascular and bronchopulmonary symptoms," Dr. Kaufman wrote in a recent issue of the *Journal of the American Medical Association*.

"The patient may insist that, despite his tobacco-induced symptoms, the only time he feels emotionally relaxed and comfortable is when he is smoking."

Dr. Kaufman said he found the reason heavy smokers feel uneasy when they try to give up smoking is that they do not breathe properly when they are not smoking. Instead of proper steady, deep breaths, heavy smokers take short breaths when not smoking. This results in an uncomfortable sense of breathlessness and pressure on the chest, and may

(Continued on Page 78)



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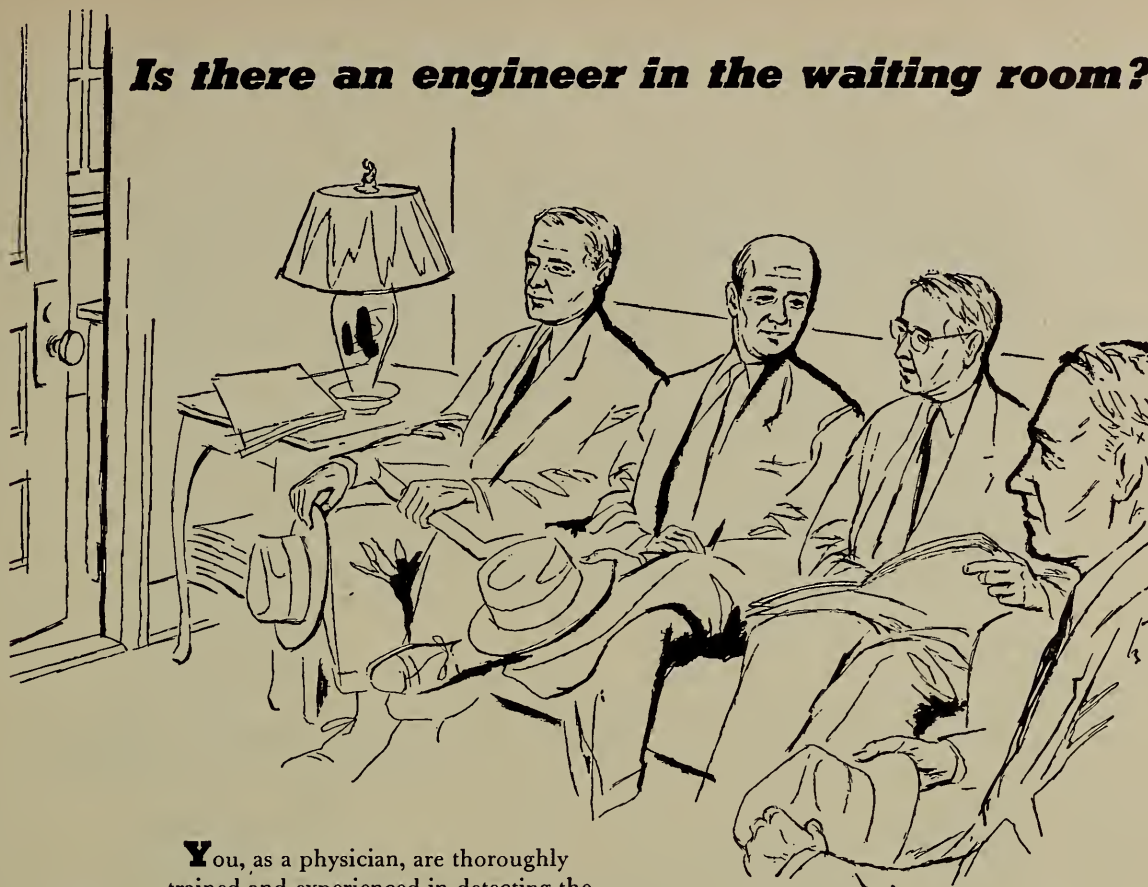
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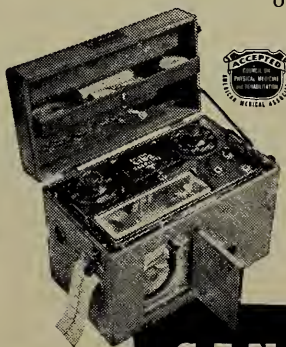
You, as a physician, are thoroughly trained and experienced in detecting the clinical conditions that affect your patients' physical being. They depend on you completely for a knowledge and guidance not possessed by themselves. Conversely, do you not similarly look to professional men in other fields for aid when the need arises?

For example, when there's the question of quality in the consideration of a new piece of diagnostic equipment — such as an electrocardiograph — an engineer can tell better than anyone, sometimes with just a superficial examination, how well the instrument is designed and made. He notices such things as workmanship, the quality of materials, and the grade of the components. As an engineer he would be sure to see the value in unitized construction in the Viso-Cardiette — amplifier, control panel and recorder as three basic assemblies — and the advantages of inkless recording in true rectangular coordinates.

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Breathing Exercises Aid in Helping Persons Stop Smoking

(Continued from Page 74)

cause the individual to become uneasy, restless, tense, tired and anxious.

"As a result of these observations, it occurred to me that with breathing exercises, the heavy smoker might learn to breathe normally even when he was not smoking," Dr. Kaufman stated. "This would make it much easier for him to break himself of the tobacco habit.

"I have prescribed breathing exercises in which the patient is taught to breathe out and then in properly 16 times a minute. By practicing these breathing exercises for five minutes eight to ten times a day for a month, the patient gradually regains his ability to breathe in a manner that by inspection approximates normal pulmonary ventilation even when not smoking.

"Once a heavy smoker has acquired the habit of breathing properly, he can feel relaxed and comfortable when not smoking. After such preliminary training, 15 heavy smokers (each smoked over 50 cigarettes a day) found it possible to stop smoking without experiencing undue difficulty. Each of these patients had tried repeatedly before to give up smoking permanently, but without success."

Food and Drug, Federal Trade Commission Agree on Close Liaison

To prevent duplication of federal efforts in policing the food, drug and cosmetics industries, the Federal Trade Commission and the Food and Drug Administration have agreed to appoint liaison officers to serve as primary points of contact between the two groups. The agencies also agreed on the following: (1) FTC to exercise sole jurisdiction over cases relating to truth in advertising of foods, drugs, devices, and cosmetics; (2) FDA will exercise sole authority over all matters relating to the labeling of foods, drugs, devices, and cosmetics; (3) the two agencies will take action simultaneously against any party only in "those highly unusual situations where it is clear that the public interest requires two separate proceedings." Both conceded there had been been needless overlapping of effort in the past.

—A.M.A. Washington Letter

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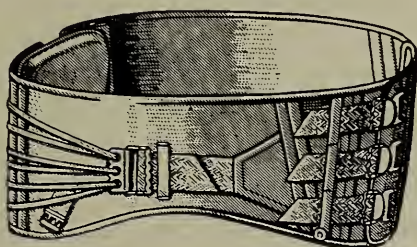
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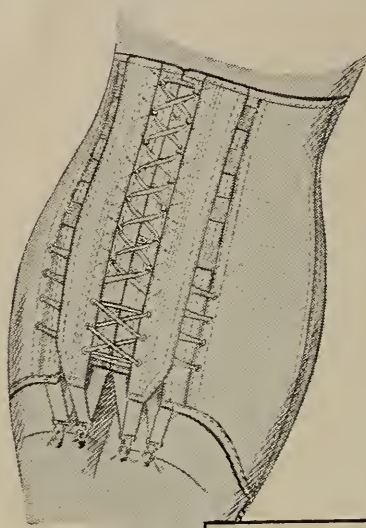
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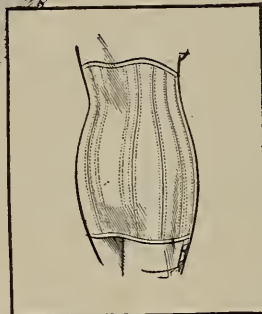
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Snakeroot Remedy May Lower Blood Pressure

An old Indian snakeroot remedy offers "good reason" to expect that high blood pressure and its complications can be relieved in both the early and late stages.

Three Houston physicians said recently that with the drug alseroxylon high blood pressure not only may be controlled when it starts, but the serious later complications may be prevented. Combined-drug treatment offers hope for reversing the once-inevitable advance of associated circulatory disorders in some instances, they said.

Drs. William R. Livesay, John H. Moyer and Samuel I. Miller used alseroxylon, an extract from the snakeroot drug *Rauwolfia serpentina*, in treating 43 hypertensive patients at the cardiac clinic of Jefferson Davis hospital.

"This drug is undoubtedly as unique a pharmacological agent as has been offered for application in clinical medicine in many years," they said in a recent issue of the *Journal of the American Medical Association*.

"Especially is this appreciated when it is contrasted with the list of hypotensive agents that have been used in recent years but that have resulted in such undesirable side-effects that their practical use has been greatly limited."

They said their study shows the drug has even greater value than previously reported. Earlier tests with the extract had been limited to patients with only mild hypertension and no complications, but the Houston physicians found that in combination with other drugs alseroxylon can produce improvement in more serious cases.

Before *Rauwolfia serpentina* extracts became available, drug treatment for such cases was difficult because of undesirable side-effects, they said.

"Alseroxylon has the distinct advantage among hypotensive agents in being associated with no serious untoward side-effects," they said. "In fact, it oftener produces certain desirable effects such as mild sedation without somnolence, and a general sense of well-being."

In patients with severe hypertension, alseroxylon may be used "to prepare them for the addition of more potent hypotensive agents by bringing about better stabilization of the disease," they said.

The drug offers additional benefits to those persons who are emotionally unstable, they said, and is "superior to drugs such as phenobarbital in its ability to allay anxiety and improve the general sense of well-being" without causing sleepiness.

"The side-effects that primarily influence the patient's psyche help to create a better opportunity to make a satisfactory adjustment to life situations," they said.

Forty-three patients who previously had not had

(Continued on Page 16)



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†Fromer, J. L., and Cormia, F. E.: J. Invest. Dermat. 18: 1, 1952.

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Snakeroot Remedy May Lower Blood Pressure

(Continued from Page 10)

hypotensive drug treatment were given alseroxylon alone. Of these, 20 responded with lower pressure and 10 returned to normal pressure levels. Of the 21 treated with alseroxylon and later with the added drug hydralazine, 12 responded and one became normal.

Of six patients given alseroxylon and hydralazine from the beginning, three were responsive and one became normal. Of the 39 given alseroxylon plus the drug hexamethonium, 36 were responsive and 18 returned to normal pressure. A large percentage of this last group had severe hypertension with complications.

The drug reduced blood pressure, increased appetite, reduced pulse rate, and produced "a sense of well-being or tranquillity."

Hexamethonium and hydralazine have been used in combination before in hypertensive patients but

produced unpleasant side-effects, the physicians said. These effects were reduced when either of the two drugs was used with alseroxylon.

The physicians said the drug gave "a just reason for further optimism over the future management of hypertension."

Foreign Operations Administration is preparing to spend \$480,500 to finance postgraduate study in the United States for 100 European physicians. Specialists will study for from six weeks to three months, while younger men will stay for a maximum of three years. Those to be invited will include all types of medical specialists, and much of the study will be designed to acquaint the foreign physicians with American hospital techniques. Selection will be made by local committees in the various foreign countries. The entire operation will be directed by the American College of Surgeons, under contract to FOA.

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Dr. John R. Hankins and George H. Yeager, University Hospital department of surgery, Baltimore, said recently the one-shot treatment controlled infection in all 46 patients tested, most of whom would ordinarily have required several doses of other penicillin types.

Benzathine penicillin G has already been found useful for treating infections accompanying rheumatic fever, for children with streptococcal infections, and for gonorrhea, the physicians said in a recent issue of the *Journal of the American Medical Association*.

Care Urged During Boating Season

Small boat accidents take about 1,200 lives each year, more than most communicable diseases, Dr. Carl J. Potthoff of Washington, D. C., reported in a recent issue of *Today's Health* magazine, published by the American Medical Association.

At this season parents should encourage children to take skills and safety courses offered free by the Red Cross, he said. Most boat accidents result from reckless behavior, ignoring storm threats, overloading leaky boats, and using defective motors. About 90 per cent of accident victims are men or boys, and the "supposedly careful" 25 to 44 year old group accounts for as many deaths as the 15 to 24 group.

Dr. Potthoff urged using only boats that will float if capsized; taking life preservers, and not trying to swim ashore if there is any other means of rescue or any floating object to hold on to.



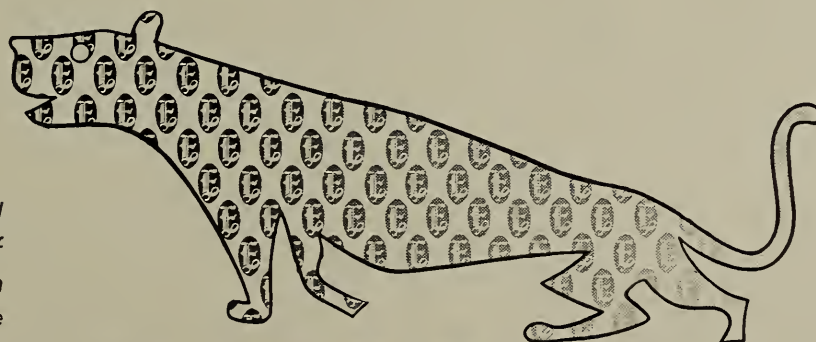
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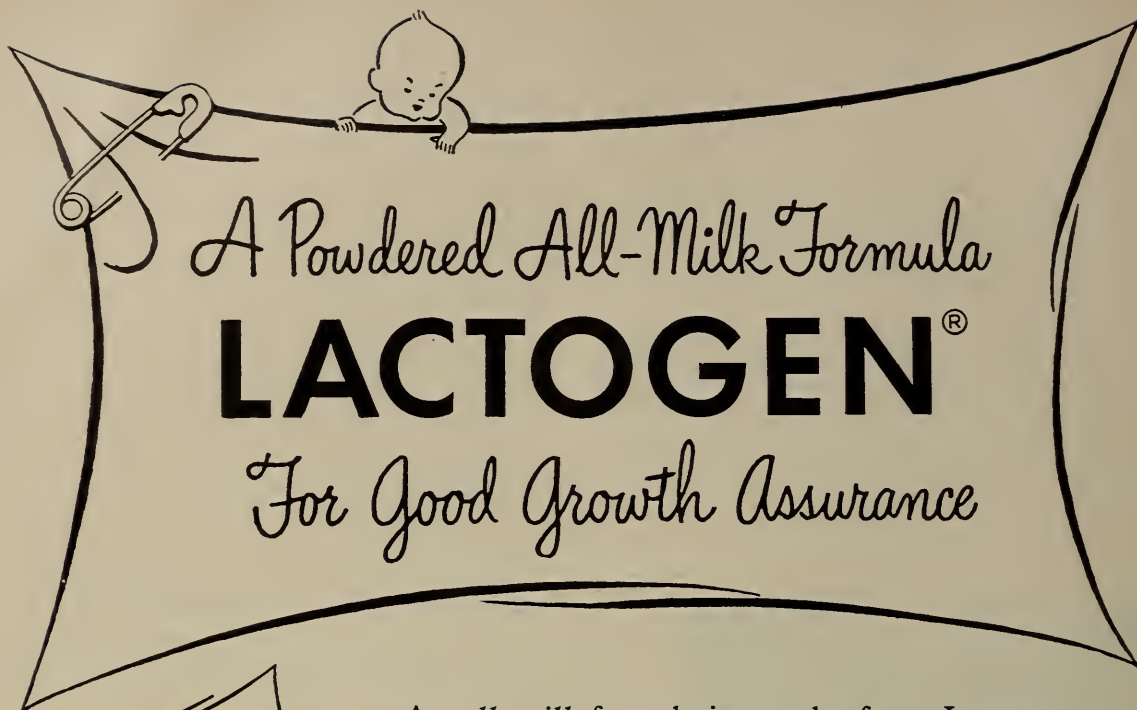
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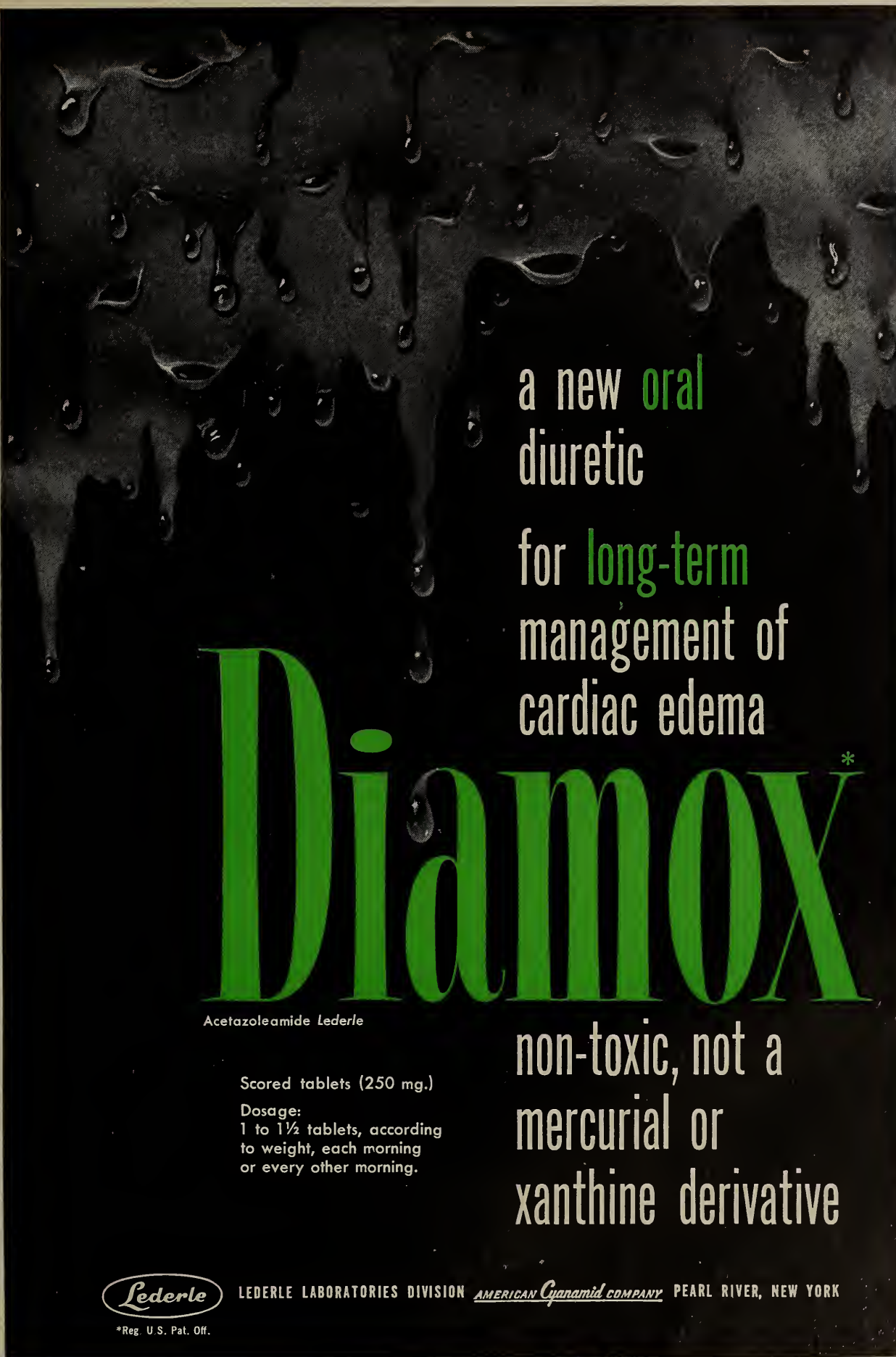
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"The Real American Medical Association"

A guest editorial, written by Dr. V. T. Williams and appearing in the May-June issue of the *Kansas City Medical Journal*, gives a graphic portrayal of what makes the American Medical Association tick as an organization. The editorial is so well done that we took the liberty to reproduce it and enclose it in the Secretary's Letter.

"Many colleagues display a perverse delight in castigating the A.M.A. In this pleasurable pursuit, they are joined by nonmedical (but professional) critics who oppose every action of the A.M.A., or gleefully deplore any A.M.A. hesitancy to take precipitate, hasty, and ill-considered steps. On occasion, we have taken pot-shots at our parent organization when it seemed proper, but to shoot without a thorough understanding or without realizing why no action was taken, obviously is the act of a child-brain.

"Let's look over the physical plant which is ours; let's examine the many A.M.A. activities and functions; let's analyze who runs the thing; what makes it tick?

"Located at 535 North Dearborn Street in Chicago is a nine-story granite building, the heart and nerve center of the American medical profession. Almost one thousand workers keep the wheels turning. The grist of this mill is fed the American public, this represents about 140,000 physicians.

"The activities in this A.M.A. building range from the three-floors-and-basement full-scale publishing plant to lawyers carefully studying proposed legislation; from white-coated technicians analyzing pills and potions to the production of television and radio programs.

"Some people think the A.M.A. devotes most of its energy to fighting 'progressive action and socialized medicine.' And, yet, about 60 per cent of all revenues (circa \$9,000,000) are spent on scientific activities. Everyone knows the A.M.A. Journal—it is one of the best. This alone costs \$4,000,000 a year. Everyone knows also the A.M.A. monthly journals in the various specialties, plus scores of books and thousands of brochures, pamphlets, and reports. The thirteen presses run on a two-shift basis.

"'Council Accepted' is a part of the average physician's vernacular. Behind these two words are several 'Councils.' They study drugs, food, cosmetics, and a jillion other matters—in fact, anything and everything pertaining to health or medicine. Other departments consider medical education, medical licensing, and hospital-service standardization. Still other departments handle quack and nostrum complaints. Too few physicians use the magnificent library service which is theirs for the asking. Twice a year, the A.M.A. presents great scientific exhibits.

"Most physicians aver our A.M.A. spends an overwhelming bulk of its income on 'fighting socialized medicine.' Last year the A.M.A. spent \$385,000 on 'public relations'; this might be construed disparagingly as the none-too-subtle 'fight against socialized

medicine.' Yet, most of this obviously was honest-to-goodness, legitimate 'public relations,' and not in a 'fight agin' anything. It takes the same amount just to maintain card index files on each M.D.—one of the nine floors is so allocated.

"As stated before, there is no phase of medicine or public health (in the broadest sense) which is not represented in this, our gigantic organization. Naturally, much time, effort and money must be spent to carry out these manifold functions; this is necessarily so, and will continue. Inevitably, some colleagues get disgusted when their own particular pet grievance is not handled posthaste; when their own private opinion is not immediately foisted and broadcast to the American people. Of course they get irritated and damn the A.M.A.!

"Who runs this 'medical octopus,' as it has been described? Well, most of these various councils and committees have full-time M.D.'s or laymen as secretaries, with top-flight physicians serving in an unselfish manner, to carry out their respective council and committee functions. We have a Board of Trustees (sometimes referred to as 'a bunch of senile fossils,' or, again as 'medical politicians'). We have a President, and the other usual officers, and we have a general manager and secretary, Doctor George Lull. The general characteristics of these gentlemen is well-known.

"First, they usually are in 'medical politics' for many years before they are elected Trustee (if we mean by 'medical politics' that they have faithfully served their county and state medical societies.) We think this is a badge of merit—not a stigma of opprobrium. Second, this does make a guy conservative, somewhat slow to act, probably deliberate in policy. Most physicians are inclined to be 'not the first nor yet the last' in their thinking. And, given fellows like this, let them practice until they're fifty or sixty, let them work in county and state medical organization jobs for twenty or thirty years, you will find men whose inherent conservatism has been potentiated by two or three decades of service in the harness—hence, the bitter, but unjustifiable, 'fossil' appellation.

"Unfortunately, at times these Trustees have been swayed by some clever, brilliant, dominating personality. That's bad! These Trustees include 'freshmen,' apt to be influenced by older and ostensibly wiser heads. Occasionally, a bunch of Trustees are more sluggish than they need be to accept newer ideas but, in general, our Trustees are a fair cross-section of a fine bunch of gentlemen doing their best. And they are, first of all, fellow-physicians. Let's remember that.

"Sometimes, when we hear colleagues gripe about the A.M.A., we wonder. Do they actually know what they're talking about; have they spent any time or effort trying to establish the facts or the background of the A.M.A. official policies or activities? Do they

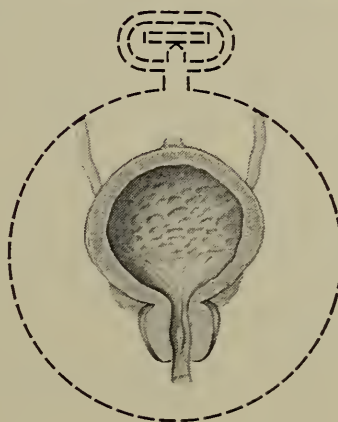
(Continued on Page 36)



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"The Real American Medical Association"

(Continued from Page 24)

read the A.M.A. Journal; do they answer questionnaires; do they alert themselves on current events in 'medical politics,' before they speak? Or do they just lambaste or damn the A.M.A. without knowing whereof they speak, merely because the A.M.A. seems such an impersonal, nebulous something, and a convenient whipping-boy? In this connection we are reminded of the irate father who comes home to find the side of the barn (or, what's worse, the house) covered with mud-balls, and immediately starts raising hell about the neighbor's kids, only to find it was his own brats who were the miscreants.

"*The guys who run the A.M.A. are us!* When we sit on our dead derrieres (dern rears to you Missourians!), and let the 'medical politicians in Chicago' do this or not do the other; when we cuss them out, remember we are cussing our fellow-physicians who are making a personal sacrifice to do our organizational work.

"The proper way to handle these gripes is to vote on every local medical society election, to serve as an officer to the best of our abilities when elected, and *to raise hell with (or change) our elected representatives* when things aren't going to suit us—the noisy axle gets the most grease!

"... V. T. Williams, M.D."

Kansas City Medical Journal, May-June, 1954

Polio Patients Must Get Chance to Work

Heroic efforts to save lives during summer polio epidemics are difficult to justify unless the paralyzed patient's independence and pride are restored after he goes home, a New York physician recently said.

Dr. John F. Marchand said the polio patient may lose muscle power but not mental power and personality. He does not "vegetate" unless neglected. He can find an "appropriate vocation and awakening interest" if helped promptly.

But he said practical requirements for restoring polio victims to "an acceptable way of life" are "easily overlooked after a summer epidemic passes and community interest dwindles."

There are now 1,000 or more young adults and children, "the residue of recent epidemics," in iron lungs in scattered emergency care areas, Dr. Marchand said in a recent *Journal of the American Medical Association*. "A comprehensive national recovery program for [polio] patients is now as urgently needed as the excellent one in effect for the benefit of the blind: a practical schedule directed toward a restoration of confidence and dignity modeled after the achievements of Helen Keller, who set the precedent of an active career although blind, deaf and speechless."

Persons handicapped in one way "perform admirably in others" if only given the chance, he said. Communities must plan not only for emergency life

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Formula: Each 5 cc. (1 teaspoonful) contains: Methscopolamine Bromide, 1.25 mg.; Phenobarbital, 8 mg. ($\frac{1}{8}$ gr.). Supplied: Pint bottles.

saving during the polio season but for long-term personality saving later. Survivors of epidemics should be transferred promptly to large regional centers and new "sheltered workshops" where they can learn constructive work and make occasional visits home.

More important than the patient's need to go home immediately after recovery is his need for a chance "to discover himself not as a burden or family liability but as a modest social and economic asset," Dr. Marchand said. In addition, the patient who goes home too soon may be in danger of sudden death or delayed muscle breakdown. Convalescence, or a decline, continues for years and constructive treatment during this time is "a medical undertaking not at all less urgent than the original lifesaving effort."

"The pervasive undercurrent of defeatism prevalent in much present planning for hospital or home care bypasses real potentialities for recovery," he said. "Although the death rate has been cut in some areas, care of post-acute poliomyelitis has been relatively neglected. An underestimation of community care requirements or improvised planning for the acute and convalescent stage of poliomyelitis can be costly and ineffective."

Medical services with new equipment and "a new standard for special education" can raise the polio

survivor from "total vegetative dependency to that of a student and finally to that of a young person who need not wait, fancifully, for a full return to physical normality before he can rediscover his dignity and initiative as a productive person," Dr. Marchand said.

"Athletic Heart" Theory Questioned

The term "athletic heart" should be scrapped because it is used with too many different meanings to describe a condition that "probably does not exist," an editorial in a recent issue of the *Journal of the American Medical Association* said.

It said the many reports on the effect of exercise on the heart led only to the conclusions that "infections are more important as a cause of cardiac disease than exercise, that exercise even when strenuous will not damage a normal heart, and that persons with a heavy body build have a lower life expectancy than those with a lighter build regardless of the type or extent of their participation in sports."

However, there can be "no doubt" that strenuous exercise may injure a heart that is already weakened, and young athletes should have close medical supervision, the editorial added.



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*Bibliography of 192 references available on request.

1. Coles, B.L., and James, U.: The Effect of Cobalt and Iron Salts on the Anaemia of Prematurity, Arch. Disease in Childhood 29:85 (1954).
2. Holly, R.G.: The Value of Iron Therapy in Pregnancy, Journal-Lancet 74:211 (June) 1954.
3. Quilligan, J.J., Jr.: Effect of a Cobalt-Iron Mixture on the Anemia of Prematurity, Texas St. J. Med. 50:294 (May) 1954.

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Magazine Articles on the Family Doctor

"Is the Family Doctor Obsolete?" is the title of a well-written article in the July issue of *Cosmopolitan* magazine. Editors estimate that 1,200,000 persons will read this article, written by David Landman, which outlines the program of the American Academy of General Practice. Another equally favorable article on the family doctor by Dr. Francis T. Hodges appeared in the August 6 issue of *Collier's*. "It's a far cry," said the journal *GP*, "from the sensational piece on fee-splitting published in the same magazine last year."

—The A.M.A. Secretary's Letter

Heredity Theory of Epilepsy Questioned After Study

Epilepsy may be associated less with heredity than with complications before, during and just after birth, two Baltimore physicians have stated.

They reported in a recent issue of the *Journal of the American Medical Association* that a study of 396 epileptics and 393 nonepileptic children "raises doubts" as to the family-pattern theory of epilepsy.

"The results of this study appear to indicate that there exists a relationship between certain abnormal conditions associated with childbearing and the subsequent development of epilepsy in the off-

(Continued on Page 46)



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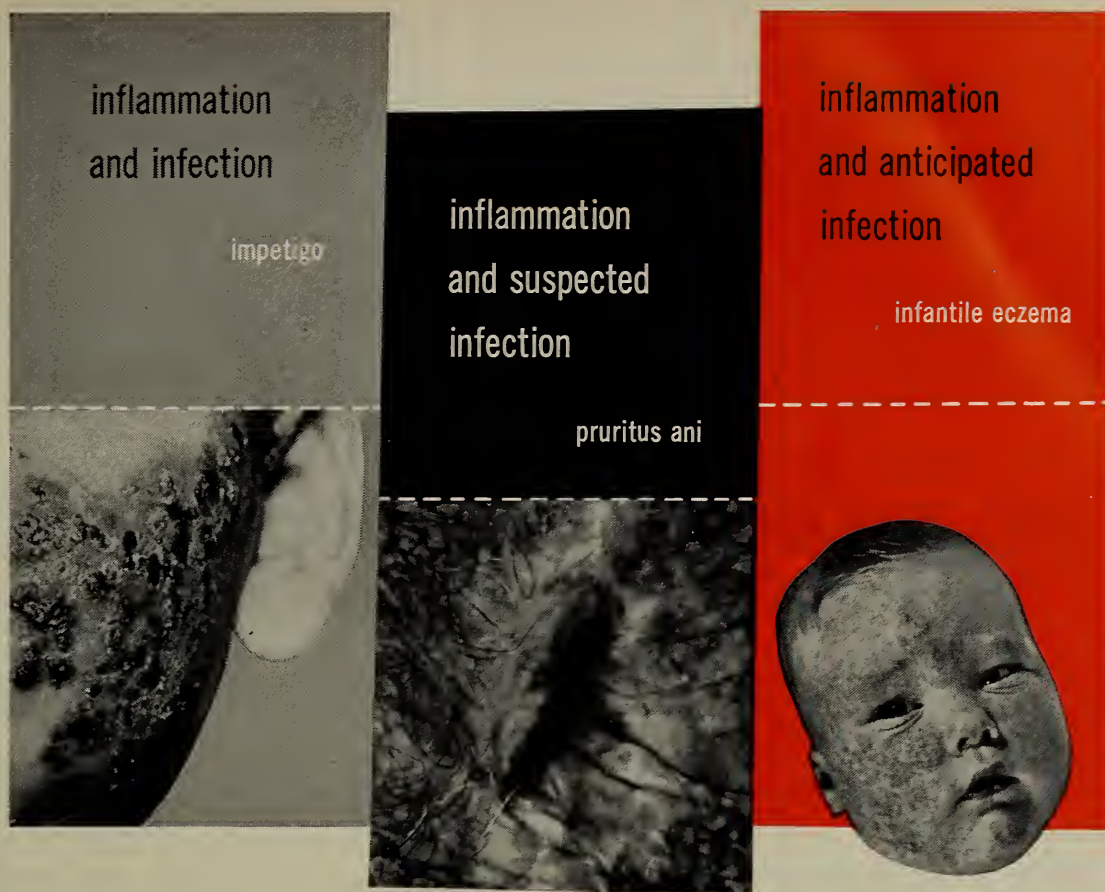
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Heredity Theory of Epilepsy Questioned After Study

(Continued from Page 42)

spring," they said. Records of more than 500 epileptic children born in Baltimore between 1935 and 1952 showed "significantly more complications of pregnancy and delivery, prematurity and abnormal neonatal conditions" than a similar number of matched control births.

"These abnormalities were just as frequent among epileptic children whose parents did or did not have epilepsy," they said.

The pattern of epilepsy in relation to mishaps in

pregnancy or birth is similar to that already reported in cerebral palsy. This indicates that epilepsy should be added to the list of "reproductive casualties" that includes stillbirth, death of the newborn, and palsy.

The physician suggested one of the reasons for the theory of family transmission of epilepsy is that premature births tend to run in families and that a large number of the epileptic births are premature.

The study, aided by grants from the Foundation for Mentally Retarded and Handicapped Children and the Civitan Club of Baltimore, was made by Drs. Abraham M. Lilienfeld and Benjamin Pasa-manick, of the Johns Hopkins School of Hygiene and Public Health.

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**ORANGE
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New American Medical Association Consultant

Dr. Stanley Truman, Oakland, recently announced that the firm of Rollen Waterson Associates had been employed to assist and work with the A.M.A. Committee on Medical Practices. Dr. Truman is chairman of the six-member committee.

He also said that the Board of Trustees had appropriated funds for the committee to carry on its work. Mr. Waterson, who formerly was secretary of the Alameda-Contra Costa County Medical Society, will conduct a pilot study covering the controversial issues of unethical practices, including fee splitting (joint billing, methods of payment of an

assistant, collection and distribution of fees by a third party, commissions and rebates) and the allied problems of excessive fees, ghost surgery, and unjustified medical and surgical procedures.

The study, Dr. Truman said, will be concerned primarily with the underlying reasons for these practices, both psychological and from the socio-economic standpoint.

—The A.M.A. Secretary's Letter

Poliomyelitis cases are now about 7 per cent behind the total for last year, with three states—California, Texas and Florida—continuing to report more than a third of the total.

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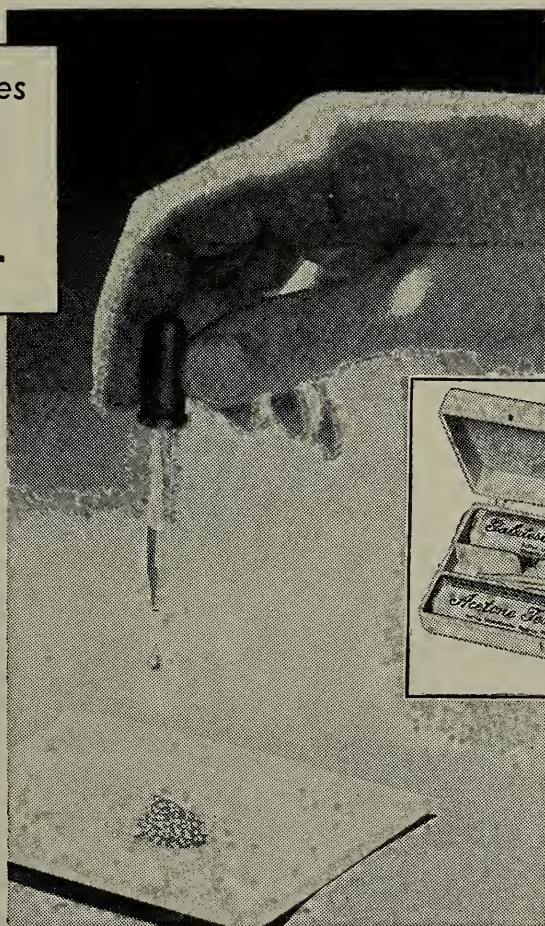
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Each tablet contains: Dihydrohydroxycodine HCl, 15 mg.; Dihydrohydroxycodine, tartrate, 0.38 mg.; Homatropine, tartrate, 0.38 mg.

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Refractory Heart Failure

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THE EARLY STAGES of congestive heart failure usually can be well controlled without difficulty. It is during the course of the disease that, sooner or later, there often comes a time when the therapeutic program, even when carried out in a seemingly satisfactory fashion, is no longer effective. The patient is then said to have "refractory heart failure." It is natural to assume at this point that the cardiac reserve has been so reduced that there is no longer sufficient active heart muscle to carry on the necessary activities of life even at rest, and that even with treatment a satisfactory level cannot be reached to maintain normal circulatory function. If a patient reaches this state, despite all the methods of treatment being applied optimally, he then truly has refractory heart failure. However, it frequently happens that the state of refractoriness is assumed even though the previously described circumstances above do not prevail. The so-called refractory heart failure may be the result of suboptimal handling of the patient. It is well, therefore, in all instances of "refractory heart failure" to consider possible factors in the patient which might be conducive to suboptimal therapy.⁵

The patient should receive "optimal" treatment. What is optimal for one patient may not be optimal for another. A physician, when confronted with a patient having seemingly refractory heart failure,

• *Any patient with so-called "refractory" heart failure should be looked upon as suboptimally handled. The patient should be studied for possible development of new disturbances, either inside or outside the vascular system, which, at the same time, have a bearing upon the heart failure.*

The entire therapeutic program should be reviewed to be sure that all aspects of therapy have been evaluated satisfactorily and established optimally. If diuretics, especially mercurial diuretics, have been given, the possible complications of such therapy, particularly in terms of electrolyte imbalance, should be considered. It is only through a general survey of the patient for an evaluation of these factors that they may be found and therapy instituted to minimize or eliminate them.

should be prepared to review the primary cardiac diagnosis, to search for development of new non-cardiac states, and to review his therapy to note its shortcomings in any sphere.

REVIEW OF DIAGNOSIS

It is important to reevaluate the primary diagnosis, to be sure that it is satisfactory, and to know definitely that no new factor has been introduced.

Primary Diagnosis. It is possible that the diagnosis of congestive heart failure may have been in

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error. Not only must noncardiac states, which cause edema, such as nephrosis or nephritis, be ruled out, but in addition it must be made certain that the congestive heart failure is produced by a cardiac state amenable to the usual treatment. Certain disturbances in cardiac function are amenable to treatment based upon the etiologic factors. This is true of myxedema, hyperthyroidism, beri-beri and various types of active myocarditis. Certain other cardiac states, such as constrictive pericarditis and chronic tuberculous pericarditis, must be treated by removal of the constricting influence, be it fibrous tissue or fluid. Where an anatomic stricture can be relieved by operation, as in mitral stenosis, or where abnormal channels for blood can be closed, as in patent ductus arteriosus, such states are best treated by the surgical procedure applicable to the particular case. Patients may show remarkable degrees of recovery following procedures to correct such defects when they have responded inadequately to treatment for congestive heart failure previously.

Progress in and New Developments in the Cardiac State. Refractoriness in therapy may result from new developments during the course of the treatment. For example, myocardial infarction may cause the re-appearance of congestive heart failure which has been previously under control. At times in older patients the onset of myocardial infarction may not be manifested by significant pain, and acute heart failure developing from it may mask to some degree minor manifestations of chest pain. It is well, with onset of congestive heart failure in older persons particularly, if heart failure has been present before and brought under control, to suspect possible myocardial infarction and to take measures to establish its presence or absence.

The onset of arrhythmia, especially if it is very rapid, may throw a patient into congestive heart failure when he has been carrying on adequately previously. The onset of auricular flutter or fibrillation may, if the loss of cardiac reserve has reached a critical level, make it impossible to control the congestive state unless the arrhythmia is controlled or stopped. Such arrhythmia may develop insidiously without the patient's knowledge, particularly in older persons. Other conditions which throw added strain upon the myocardium, such as hypertensive states or exacerbations of such states, reactivation of rheumatic fever, or the effects of developing bacterial endocarditis, may similarly interfere with compensation and bring about heart failure that is difficult to control. Again, therapy must be directed at the newly developed factor.

Progress in and New Developments of Noncardiac States. Disease outside the heart may interfere with therapy. At times the development of anemia, for example, may disrupt an effective program. Hemo-

globin values below 50 per cent would produce oxygen deficiency in tissues if adjustments were not made in the cardiovascular system. Increase in cardiac output is a compensatory mechanism but this throws an increased load upon the heart. If this strain is sufficient to produce decompensation in the damaged heart despite treatment, the patient will go into heart failure. Correction of the anemia may bring the patient out of congestive heart failure. Pulmonary infarction, a common accompaniment of congestive heart failure, is not infrequently a factor which makes the program for congestive heart failure ineffective. Pulmonary infarction is not always easy to recognize. Its less florid clinical pictures are frequently misdiagnosed, particularly when low grade fever and some tachycardia are the chief findings. Even when pulmonary findings are present they may be misinterpreted as pneumonia or as recurrent pneumonia. So called "masked" hyperthyroidism is also an unrecognized factor at times in refractory heart failure. In older patients, particularly those having auricular fibrillation, manifestations of hyperthyroidism are not always clearly evident or are not always a dramatic part of the symptomatology and clinical picture.

Because of digitalis effects, low salt diets, or other circumstances a patient with congestive heart failure may enter a stage of malnutrition or starvation. Refractoriness to treatment may develop upon this basis, especially if protein malnutrition is extensive. In these circumstances it is necessary to treat the patient nutritionally until he improves from that standpoint. The previously used aspects of the program may then be reinstituted.

It is clear that the development of so-called refractory congestive heart failure requires review not only of the patient's primary diagnosis, but also of the present status of the individual to determine whether or not an additional factor, which is important either in reducing cardiac reserve or in increasing strain upon the myocardium, has appeared.

THE REVIEW OF THERAPY

There may be inadequacies in and complications to therapy which lead to suboptimal handling of the patient. As already stated, early in congestive failure it is possible that even suboptimal use of procedures may cause complete disappearance of congestive heart failure simply because the disease is not far advanced. However, when the disease advances to a point beyond control by imperfect therapy, the optimal use of each and every procedure may be extremely important in effecting adequate control of the congestion. Suboptimal handling of the patient may result from inadequate use of procedures, from omission of procedures, or from complications to

therapy. Some of the most important of these are listed below.

Rest. In recent years there has been considerable change in the attitude on bed rest for patients with heart disease. The sitting position is obviously more comfortable from the standpoint of dyspnea and, in fact, use of a chair rather than a bed for rest is considered satisfactory. Ambulation as soon as possible is now standard for patients with congestive cardiac disease. This tends to prevent the complications of stasis. However, it is perfectly clear that excessive physical activity will lead to cardiac decompensation and that the evaluation of rest in therapy is important when the disease is refractory.

Status of Digitalization. The basic problem in the use of digitalis in congestive failure rests in careful tailoring of therapy to the individual patient. Rules of thumb commonly used in digitalization may lead to the false belief that specific doses of digitalis may be given to individuals on the basis of body weight, and the dose of the drug then dropped to a so-called maintenance level. Even with preparations such as Digitoxin, in which the absorption factor is least variable, the effect of the drug upon the individual and upon the individual's heart is variable. In all cases the dose of digitalis should be adjusted to the patient's own needs. An average amount may be given at the beginning to help saturate the patient only as a guide for further administration of digitalis to the proper level for that particular person. This must be done and the dosage adjusted upon the patient's reactions to the drug and upon the effects on the patient's circulation.

Many patients receive suboptimal doses of digitalis, their physicians believing they are administering optimal dosage. This is a very frequent cause of unsuccessful control and the lack of control may erroneously be interpreted as refractory heart failure. It can be corrected by proper adjustment of the dose.

Patients put to bed with congestive heart failure and given rest, digitalis and diuretics often respond satisfactorily. They may respond due to the rest and diuretics even though the digitalis is not given to the optimal level. However, when the patient again is permitted to be up and exercise to some degree, and the effects of rest are no longer totally operating in the maintenance of a normal circulation, the need for digitalis to the greatest point of effectiveness becomes important. This situation should be reviewed by the physician when the patient becomes "refractory."

Certain digitalis preparations, especially gitalin, appear to have a wider therapeutic range than others; and in refractory cases, when other digitalis preparations produce toxicity before therapeutic re-

sults are accomplished, gitalin may still be effective and produce improvement without toxicity.¹

When a fibrillating heart does not slow under digitalis and the congestion generally does not respond, the presence of other factors should be suspected, including chronic infection, hyperthyroidism and active myocarditis.

Suboptimal use of digitalis may include overdosage as well as administration of too little.¹ Usually in case of excess use the signs of digitalis toxicity are present, and since they are well known such a state is usually recognized. However, there are some instances of advanced congestive heart failure, treated intensively with digitalis and without clear evidence of toxicity, in which the patient improves when the digitalis is reduced or stopped for a period of time. Intoxication from digitalis, by the production of frequent extrasystoles or tachycardia, may reduce the efficiency of the heart and precipitate congestive heart failure. When large doses of digitalis are used and the failure progresses, it is important that these aspects of the use of digitalis be reviewed and the symptoms and signs of digitalis overdosage sought out, for they are usually present as well.

The author's experiences in a large charity hospital indicate that patients with congestive heart failure are often sent in from rural areas in varying stages of digitalization. Because of the great variability in the type of preparation, the color of tablets, and the physical nature of the medication, the patient may not know that he has taken digitalis. The new observer, unaware of the fact that the patient has received some digitalis, may attempt rapid digitalization and in doing so throw the patient into digitalis intoxication. In these circumstances rapid regular heart action from digitalis block may be thought to result from the heart disease and more digitalis erroneously given.

Water. Cases in which the water content of the body is inadequate owing to therapeutic restriction of intake are not frequent now. There has been in the last several years a considerable upswing in the use of large amounts of water and control of salt intake. Water restriction may produce hypertonic dehydration. Urea and salt retention develop and changes in the kidneys may take place, as reflected by the presence of casts and red blood cells in the urine. This may lead to a state which in the past sometimes was interpreted as refractory heart failure. It is easily corrected by the administration of water.

Electrolyte Disturbances. In the past procedures to influence the electrolyte balance have not been as highly developed as they are at the present time. These measures are often very effective in the control of heart failure when those already mentioned above

are not adequate. Patients considered refractory in the past are now well handled with procedures directed at electrolyte control.⁶ Some of these important changes will now be discussed.

Sodium Restriction. The control of the intake of the sodium ion, with amounts of salt reduced to one or two grams a day, is important in the management of many patients with heart failure. There is variability from patient to patient in the degree of salt restriction necessary, depending in part upon the nature and extent of disease. Some patients will lose edema on 1.0 gm. a day and gain on 2.0 gm. Some require restriction to 0.5 gm. There are differences of opinion on severe restriction of sodium and the use of mercurial diuretics in some patients. Some physicians prefer to use rigid sodium restriction to obviate the use of a diuretic. Others prefer more liberal sodium intake and a greater use of the mercurial diuretics. There are many patients for whom a choice may be elective, but for others who are more refractory to therapy both procedures are absolutely essential.

Salt restriction may result in three general difficulties. Occasionally in patients having so-called salt-losing nephritis, salt is lost excessively in the urine. If restriction is also carried out in the diet, pronounced dehydration may take place and the results of sodium lack, as described below, may occur. Secondly, a patient may take additional sodium despite dietary instructions. He may unconsciously get salt in his diet. This may happen if the instructions he has been given are not adequate and he takes sodium bicarbonate or some other sodium-containing substances which he does not consider in the category of salt. He may also take foods with much salt in them, not knowing their content; or, owing to the unpalatability of the diet low in salt, the patient may cheat. Both of these situations can be detected by determining the amount of salt in the 24-hour specimen of urine. Thirdly, the poor intake of food owing to unpalatable low sodium diets may cause anorexia and a continuing train of symptoms related to malnutrition resulting in additional refractoriness, as already mentioned.

Mercurial Diuretics. Diuretics are not always necessary in the treatment of congestive heart failure. However, their effectiveness in sweeping out water and salt has, because of their efficacy, made them one of the standard agents of treatment in refractory heart failure. Use of them may make the difference between success and failure in a program, especially if the diet is liberal in sodium.

Mercurial diuretics are quite effective as a rule. As with all drugs, there is variability in the response, owing to a number of factors.⁴ These include poor absorption at the site of injection, dietary influences, age, poor renal excretion, and pathologic changes

elsewhere in the body. The present discussion is not concerned with reactions to mercurial diuretics (such as sudden death from ventricular fibrillation, activation of epilepsy, and local reactions) but with the stage of refractoriness which may develop during their use. At times effectiveness of these drugs is enhanced after certain procedures. In some instances phlebotomy has acted in this way. Reports also indicate that the addition of vitamin C or pyridoxin to the material when injected may, when the special conditions to be described below do not exist, help potentiate the action of these drugs.

Without entering into the arguments concerning the action of mercurial drugs, it can be assumed that they are effective diuretics through suppression of tubular reabsorption of electrolytes. The chief of these are sodium and chloride. The concentration of sodium and chloride ion in body fluids determines, in part, the effectiveness of the action. Activity of the drug produces, depending on its relative effectiveness from person to person, a great or small loss of chloride. A variation in sodium output also occurs.

The simplest method² to determine the need for electrolyte studies, especially sodium, on the blood is the modified Fantus test. This test, employing silver nitrate and a dichromate solution, will give a rough index of the urinary content of sodium chloride and show need for serum electrolyte studies. Estimates of 3 gm. per liter suggest depletion of electrolyte while 4 gm. or more per liter make it unlikely that the patient is suffering from salt depletion. If low values are obtained further studies are indicated to establish sodium and chloride relationships in the blood. Depending upon their effectiveness, along with the variability in intake of these ions, a number of individual variations in the electrolyte pattern may appear as the result of the use of the mercurials. Four of these disturbances of importance are described below.

In the first place mercurials may not be effective if the heart failure itself has so reduced glomerular filtration that there is little or no electrolyte available for mercurial action in the tubules. In this circumstance there is insufficient glomerular filtrate presented to the tubules for any remarkable action by the mercurials. Here, aminophyllin given slowly by intravenous infusion, preferably an hour to an hour and a half after the mercurial diuretic is given, or even at the same time, may increase glomerular filtration sufficiently to produce enough filtrate for significant mercurial action in the tubules.

A second way in which the patient may be refractory to mercurials is frequently noted in the early stages of administration of these agents, especially in the first week of their use. At this time there may be sufficient sweeping out of chloride in the kidneys, especially if chloride intake is low, so that chloride

loss considerably exceeds sodium loss. The patient becomes hypochloremic and alkalotic. The resultant reduction in blood chloride may be great enough to make the patient refractory to the mercurial. This level is variable. Sometimes the range is in so-called low normal and is easily elevated by oral administration of ammonium chloride to make the patient again responsive to the drug. Frequently if the blood level of chloride is below 86 mEq. the patient is refractory. This state, termed hypochloremic alkalosis, may sometimes evoke some of the symptoms of the low salt syndrome described below. The patient may first lose weight rapidly. Anorexia may follow and weakness and confusion may appear. Despite the use of the mercurial drug the patient becomes waterlogged and the severity of heart failure progresses. Renal failure and uremia may appear. Clinical differentiation is often satisfactory, but where there is difficulty studies of the blood will indicate the presence of alkalosis, low chloride levels, and sodium levels which are usually within normal range. Potassium levels in the blood are generally normal or slightly decreased. Ionized calcium is reduced and signs of latent tetany may appear. Treatment is best carried out by stopping the mercurial drug and administering chloride ions with or without a cation exchange resin. Sodium chloride is not suitable. Chloride may be given as dilute hydrochloric acid, 3 to 5 cc. three or four times a day by mouth, or as large doses of ammonium chloride, 6 to 10 gm. in divided dose per day. Potassium salts must also be supplied. After the electrolyte disturbances are corrected the patient may become responsive to the mercurial diuretic again.

A third disturbance that may occur with the use of mercurial diuretics is the low salt syndrome.³ This is usually due to the efficiency of the drugs in the face of low salt intake or occasionally in patients with salt-losing kidneys. It is important to watch for this circumstance in patients after prolonged therapy on low salt diets and such diuretics, as well as in those with profuse sweats, loss of blood, and vomiting and diarrhea. Renal disease predisposes to development of the syndrome. In this condition there is such an outpouring of sodium that hyponatremia develops. Chloride balance, often because of the administration of ammonium chloride, may remain satisfactory. Acidosis, with resultant reduction in carbon dioxide combining power, low blood sodium, and azotemia, frequently appears. A variable train of symptoms results—anorexia, nausea, vomiting, oliguria, apathy and, at times, mental aberration. Weakness, faintness, and tachycardia develop. Mental confusion occurs.

These symptoms, in varying combinations and in varying degree, may lead a physician to believe that certain other states are present. For example, if the

patient is one with hypertensive heart disease, the development of oliguria and the presence of erythrocytes and albumin in the urine may lead the observer to conclude that terminal nephritis has developed. The presence of azotemia may lead him to believe that his impression is confirmed. He may then decide that the patient has reached a terminal state and that there is no therapy that would be effective. In many patients it also happens that the edema becomes considerably worse and it is often thought that the congestive heart failure can no longer be controlled even with increasing doses of drugs. Since more vigorous therapy tends to make the patient worse, the observer may also believe that the patient is moribund and not apply indicated treatment, namely infusion of hypertonic saline solution with added potassium. At times the clinical picture is that of peripheral collapse and the situation may be mistaken for myocardial infarction. If fever, dyspnea and cyanosis appear, as they often do, the combination of findings may cause the condition to be mistaken for pneumonia, and again the wrong treatment applied.

The low salt syndrome with the clinical picture as described does not necessarily mean that all patients with heart failure and low serum sodium values fall into this category. Serum sodium levels are often mildly reduced in congestive heart failure and may be more severely depressed by some of the factors intensifying the failure—infection, digitalis toxicity, low salt diets—which produce further decreases in sodium levels. Correction of these factors is important in the treatment. In some circumstances the reduction in serum sodium may reflect intracellular metabolism which has a bearing on the extracellular osmolarity. Although such processes are not well understood, they are thought to be causative factors in hyponatremia both in and outside the heart failure problem—for example, in pulmonary tuberculosis and in other debilitating states. The low sodium under such circumstances may not represent a true depletion of sodium but may represent reduction in tonicity of extracellular fluids to correspond to cellular metabolism. In these circumstances in heart failure, administration of hypertonic saline solution would merely tend to increase edema, for the body would tend to maintain the “new” reduced tonicity level, and with the fluid restriction needed to stimulate the increased concentration of salt, great thirst would appear.

In congestive heart failure, factors leading to such states of so called “chronic dilution hyponatremia” are not always clearly evident and are not well understood. The mere addition of hypertonic saline to the treatment in such circumstances may not help the refractory patient with edema and may even be harmful. The differentiation of such patients from

the low salt syndrome described above may be difficult. In both, edema may be striking. Both may have received intensive therapy with mercurials. Gradual onset, unrelated to mercurial therapy favors the chronic dilution type. If there is acute development of the symptomatic picture of the low salt syndrome, associated with circumstances that go along with its production, as well as its symptoms and signs, the probability is that hypertonic salt solution will have favorable effect.

Much confusion exists in the present status of the problem of hyponatremia and clinicians should be guided by the factors mentioned above. Even when accurate electrolyte determinations on the blood are available the problem of therapy still remains a difficult one.

In general, certain clinical facts also help in the differentiation of hypochloremic alkalosis and the low salt syndrome. Hypochloremic alkalosis is fairly frequent, rather acute in onset, follows only several doses of a mercurial after short term therapy. Underlying renal disease is not important and tetany occasionally develops. The salt depletion syndrome is not as common, generally follows more prolonged use of mercurials, is more common with underlying renal disease, and tetany is not associated.

Still of most importance is the careful watching of the patient before any of these circumstances develops, to prevent their occurrence. Preventive therapy will often eliminate these complications which at best have a high mortality.

A fourth disturbance, occurring in the absence of mercurial therapy, is chloride acidosis. It is sometimes seen during the administration of mercurials even though not resulting from them, especially when ammonium chloride has been given over a long period. It is important because of the symptoms de-

veloping from it. The picture is more common in the presence of renal insufficiency. The clinical picture is insidious in onset and is characterized by many of the symptoms seen in the low salt syndrome, such as anorexia, nausea, and vomiting, mental apathy and at times even mental confusion. It is important that chloride administration be stopped and the acidosis treated. This can be done with intravenous infusion of lactate or bicarbonate solution.

Hypochloremic acidosis is another late manifestation in heart failure related to malnutrition, renal disease and other factors. Electrolyte therapy is not successful. Diuretics should be stopped and salt is permitted in the diet. Edema may become more severe but after the electrolytic pattern is corrected, mercurials may again be given and salt restriction resumed.

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Emesis and Hiccough

Treatment with Chlorpromazine

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VOMITING, ALTHOUGH USUALLY TRANSITORY, sometimes is a most aggravating problem. It can be particularly onerous in association with diseases in which hemorrhage in the upper gastrointestinal tract is a hazard, or following certain kinds of operations on the eyes or in cases of idiosyncratic reaction to drugs. Hiccough is not as prevalent as emesis but at times can be just as disturbing to the patient. When persistent in elderly patients in the postoperative period, it may be of grave prognostic purport.

Chlorpromazine, a central nervous system depressant, is a new therapeutic agent for the control of vomiting and hiccough. It was originally developed by the Rhone-Poulenc-Specia Laboratory and is marketed in France under the trade name of Largacil.* This compound has two diverse applications, one as an anti-emetic, the other as a depressant for managing excessive psychomotor activity.

The minimum lethal dose for mice varies from 50 mg. per kilogram of body weight when it is given intravenously to 500 mg. per kilogram when given orally. In dogs at intravenous dosages of 50 to 100 mg. per kilogram no deaths occurred.

No serious effects from chronic toxicity have been observed. In experimental animals the liver has decreased slightly in weight and there have been slight increases in the weights of the adrenal glands and the testes in animals examined postmortem. No deleterious effects were noted in the offspring of pregnant animals.

The anti-emetic effect of Thorazine is probably owing to its action on the medullary chemoreceptor trigger zone. Because of this, vomiting that is caused by drugs that act directly on the intestinal tract or on the nodose ganglion of the vagus nerve is not blocked by Chlorpromazine. The drug has controlled emesis in 80 per cent of all patients treated, regardless of the cause of vomiting.

Friend and Cummins¹ found the drug effective in suppressing nausea and vomiting in carcinomatosis, labyrinthitis, lymphomatosis and uremia. Vomiting caused by antibiotics, protoveratrine and narcotics was usually promptly controlled. In patients receiving nitrogen mustard and radiation therapy, vomiting was considerably reduced. Good results were

• Thorazine was very effective in the control of vomiting, regardless of cause, in 20 cases in which it was used. It stopped hiccough in five of seven patients treated and partially controlled it in the other two. The drug was more effective when given intramuscularly than orally. Use of the drug intravenously was observed in one case; shock occurred soon after injection.

obtained with the drug in cases of nausea and vomiting due to gastritis, digitalis, hexamethonium, surgical anesthesia and pregnancy. Vomiting of pregnancy was relieved in 75 per cent to 81 per cent of a total of 850 cases studied. Chlorpromazine is reported to be effective in the suppressing of vomiting in motion sickness and in relieving mental manifestations of severe psychoneurosis.²

Thorazine has the ability to prolong the action of narcotics, barbiturates and alcohol. This property makes it imperative to decrease the amounts of narcotics or barbiturates when prescribing Thorazine. The same property, however, may be of benefit. It has proved beneficial in the relief of pain in patients with terminal carcinoma who require large amounts of narcotics to keep them comfortable. When Thorazine is used, less narcotic is needed and the intervals between medication can be considerably increased. Thorazine has been found useful in treating withdrawal symptoms in patients addicted to narcotics.

Thorazine may be administered intramuscularly or orally. In cases of severe vomiting the intramuscular route is mandatory for the first one or two doses. For milder vomiting, oral administration is usually sufficient.

In cases observed by the authors, oral administration often was preceded by at least one parenteral injection to gain rapid control. It was noted that intramuscular injection was definitely more effective than oral administration. The amount of the drug given varied from 25 mg. to 50 mg. every four, six to eight hours, depending upon the response or the appearance of side effects.

One of the patients observed had received 50 mg.

*In this country the trade name is Thorazine.

TABLE 1.—Results of use of Thorazine in 27 cases of emesis or hiccough.

Case	Age and Sex	Primary disease	Emesis or hiccough	Cause	Thorazine dosage	Result
1	50 F	Postoperative pyelotomy	Emesis 72 hours	Sensitivity to narcotics	25 mg. intramuscularly, 25 mg. orally every 6 hours x 3 doses	Controlled
2	76 F	Postoperative nephrectomy	Persistent emesis	Narcotic and antibiotic sensitivity	25 mg. intramuscularly every 8 hours x 3 doses	Controlled
3	49 F	Renal colic	Emesis	Sensitivity to morphine	25 mg. intramuscularly, 1 dose	Controlled
4	48 M	Renal colic	Emesis	Sensitivity to morphine	50 mg. intramuscularly, 1 dose	Controlled
5	27 F	Acute cystitis	Emesis	Reaction to Furadantin	25 mg. intramuscularly, 1 dose	Controlled
6	82 M	Inoperable carcinoma	Emesis	Reaction to estrogens	25 mg. orally every 8 hours	Controlled
7	52 M	Carcinoma of prostate	Emesis	Reaction to stilbestrol	25 mg. orally every 6 hours, 4 doses	Controlled
8	46 M	Carcinoma of prostate	Emesis	Sensitivity to estrogens	25 mg. orally every 6 hours	Controlled as long as medication given
9	48 F	Acute pyelonephritis	Emesis	Reaction to aureomycin	25 mg. orally every 8 hours, 3 doses	Controlled
10	32 F	Postoperative pyeloplasty	Emesis	Reaction to morphine and surgery	25 mg. intramuscularly every 12 hours, 2 doses	Controlled
11	26 M	Ureteral calculus	Emesis	Reaction to Gantrisin	25 mg. orally every 6 hours, 4 doses	Controlled
12	65 F	Polycystic kidney disease, terminal	Intractable emesis	Uremia	25 mg. intramuscularly; 25 mg. every 6 to 8 hours, one week	Controlled during administration
13	46 F	Terminal chronic glomerulonephritis	Intractable emesis	Uremia	25 mg. intramuscularly every 6 hours	Controlled
14	59 M	Acute enteritis	Emesis	Enteritis	50 mg. intramuscularly followed by 25 mg. every 6 hours	Controlled
15	58 F	Acute enteritis	Emesis	Enteritis and reaction to Terramycin	25 mg. intramuscularly; 25 mg. orally; 2 doses at 4 and 6 hour intervals	Controlled
16	28 F	Acute enteritis	Emesis	Enteritis	50 mg. intramuscularly	Controlled
17	64 M	Benign prostatism	Hiccough	Followed surgery	25 mg. intramuscularly every 6 hours, 2 doses; 25 mg. orally, 3 doses	Controlled
18	72 M	Cholelithiasis	Hiccough 6 days' duration	Followed surgery	25 mg. intramuscularly	Controlled
19	78 M	Ischiorectal abscess	Hiccough 10 days	Postoperative	25 mg. intramuscularly every 8 hours, 3 doses	Controlled
20	69 M	Chronic pyelonephritis, renal calculi	Hiccough	Reaction to primary illness	50 mg. orally, 4 doses; 50 mg. intramuscularly, 4 doses; 25 mg. orally, every 6 hours, 8 doses	Partial control by continuous medication
21	74 M	Benign prostatism	Emesis	Reaction following surgery	25 mg. orally every 4 hours, 6 doses; every 6 hours, 12 doses	Controlled
22	82 M	Carcinoma bladder, chronic alcoholism	Hiccough delirium tremens	Cerebral accident after surgery	50 mg. every 3 hours, 3 doses	Controlled 12 hours; patient died 41 hours later
23	65 M	Mucocele appendix	Hiccough	Postoperative	25 mg. intramuscularly every 8 hours	Partially controlled
24	40 F	Uterine fibroids	Emesis, vertigo	Chronic toxic labyrinthitis exacerbation after hysterectomy	25 mg. intramuscularly every 6 hours, 2 doses	Controlled to pre-operative status
25	25 F	Pregnancy 2 months	Morning emesis	Pregnancy	25 mg. orally every 8 hours, 4 doses	Controlled
26	24 F	Pregnancy 2 months	Emesis severe	Pregnancy	25 mg. intramuscularly, 2 doses	Controlled
27	23 F	Pregnancy 2½ months	Hyperemesis Gravidarium	Pregnancy	25-50 mg. intramuscularly every 24-36 hours	Controlled by continuous medication

of the drug intravenously. The patient went into shock and it was necessary to use artificial respiration and vasopressor substances. After 15 minutes the blood pressure gradually returned to the pre-medication level and respirations to normal. Perhaps the emergency was entirely fortuitous and unrelated coincidence, but until more is known about this mode of administration, it is believed that the drug should not be used intravenously.

For the most part the side effects reported are not very distressing. Drowsiness of varying degrees occurs in almost all patients who receive the drug. In the treatment of ambulatory patients, drowsiness can be combated by giving Dexedrine, 2.5 to 5 mg., with a morning and noon dose of Thorazine, or with caffeine at the same time intervals. Vertigo and tachycardia sometimes occur. Mild postural hypotension has been reported. Therefore when a first injection is given in an amount as large as 50 mg., the patient should be supine.

Jaundice in association with Thorazine therapy has been reported rarely. In one group of 2,500 cases in the United States and Canada it occurred in 13 patients. In England and Europe jaundice was noted in only three of more than 10,000 patients treated with Chlorpromazine.

Dryness of the mouth varying from mild to severe is a common side effect. In the present series complaint of dry mouth was made more often after the first dose than with the succeeding administrations of the medicine.

The use of Thorazine for treatment of emesis or hiccoughing was observed in 27 cases. Some of the patients were treated by the authors, others by colleagues. All were adults ranging in age from 23 to 82 years. All but six were hospitalized at the time they received the drug.

The results observed (Table 1) indicated the effectiveness of Thorazine as an anti-emetic and in the control of hiccough. It is to be noted that some degree of relief occurred in all cases. In two patients singultus was only partially controlled. No doubt there might have been more failures had the group been larger and the cause of vomiting and hiccough more diversified, a conclusion that is borne out by the experiences of other investigators.

The amount of Thorazine required to control emesis and hiccough was surprisingly small. Continuous daily dosage was necessary for patients with uremia, for patients in terminal illness, for those with carcinoma of the prostate, and for two of the patients with hiccough. One of the patients with vomiting of pregnancy required 25 mg. to 50 mg. of Thorazine every 72 hours to keep the vomiting under complete control. For one pregnant patient, 25 mg. intramuscularly every 24 to 36 hours was necessary. After 12 doses 50 mg. intramuscularly was required to control the vomiting.

Brief reports of cases illustrative of the effectiveness of Thorazine follow:

CASE 11 (Table 1): A 65-year-old woman in a terminal phase of uremia secondary to polycystic kidney disease had continuous vomiting and muscular twitching which had not been controlled by any therapy. The blood pressure was 190/110 mm. of mercury. The nonprotein nitrogen content was 160 mg. and the creatinine content 9 mg. per 100 cc. She was given 25 mg. of Thorazine intramuscularly, following which no emesis occurred for ten hours. From that time on 25 mg. was given orally every six to eight hours as was necessary to control the vomiting. The patient was able to take fluids and foods orally for the following week. The drug was then stopped to conserve supplies for use in less hopeless cases. Very shortly after the drug was curtailed, the patient lapsed into coma and eventually died.

CASE 12 (Table 1): A 46-year-old woman with terminal glomerulonephritis had severe nausea and vomiting of ten days' duration. After administration of 25 mg. of Thorazine intramuscularly, there was no vomiting for 26 hours. Oral medication did not completely control the emesis but intramuscular injections at six-hour intervals were satisfactory.

CASES 18 and 19 (Table 1) illustrate the effectiveness of Thorazine in the treatment of hiccough. In both of these patients the symptom was of such magnitude as to overshadow the original disease and kept the patients hospitalized. Both of them had been seen by several consultants and many of the known remedies had been tried. One of the patients had partial control of hiccoughing if he was put into deep sleep with morphine and barbiturates, but the condition always recurred. A single injection stopped the hiccoughing in this patient and he eventually was discharged from the hospital four days later. The other patient had no hiccough following one injection, but was given two other injections because the nurse attending him wanted to be sure there would be no recurrence. It was noted that both of these men went into a deep sleep of six hours' duration after the medication. Other than this no side effect of any magnitude was observed.

As far as side reactions were concerned, there were no serious symptoms observed in this group. All of the patients experienced some dryness of the mouth, especially those who were less ill and particularly those with acute enteritis. Two patients complained of vertigo but it was not severe. Drowsiness was mild to severe but was never a matter of serious concern and was even welcomed by the patients with hiccough.

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Dystocia Due to Soft Tissue

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SOFT PARTS DYSTOCIA, as defined by Greenhill,² is "abnormal or pathological labor attributable to the soft parts of the pelvis in contradistinction to difficulties encountered because of the bony pelvis." In the present discussion, the scope is widened to include all soft tissues that may modify labor in any way. Such tissues fall into two main groups. The first of these, referred to as genital, includes all the tissues of the vulva, vagina, cervix, uterus, and annexae. In the second, or extragenital group, are included all lesions of the perineum, bladder, rectum and retroperitoneal tissues of the pelvis.

For simplification of discussion, these various lesions, both genital and extragenital, are grouped under five different headings.

I. Anomalies or Congenital Modifications

The first of these, as the heading indicates, includes all anomalies or congenital modifications that may result in dystocia, whether genital or extragenital in origin. In the group of genital origin are included uterus bicornis, uterine retroflexion, uterine antelexion, septate vagina and vaginal atresia.

In the past six years on the Obstetrical Service at Children's Hospital, San Francisco, bicornuate uterus has been observed in ten patients. Of these, four were delivered vaginally and six by cesarean section. Three others have been operated upon for removal of the uterine septum because of the patient's inability to carry to term. How effectual this treatment is, remains to be seen.

Uterine antelexion and retroflexion was not noted in any of this group of patients. Septate vagina, however, occurred in three patients, all of whom were successfully delivered from below, following ligation and removal of the septa during the second stage of labor. There were no patients with pronounced vaginal atresia. However, in seven patients there was congenital narrowing of the vagina of sufficient degree to result in extensive vaginal lacerations at the time of delivery.

In this group in which there were lesions of the tissues of extragenital origin, are included spina bifida, exstrophy of the bladder, ectopic or pelvic kidney, ectopic or pelvic spleen, anterior sacral meningocele and teratomas of various types. Although it is extremely rare, ectopic spleen should be kept in mind in the presence of any firm pelvic

• In dystocia caused by abnormal conditions of the soft parts, the etiologic changes may be either in the genital tissues or in adjacent soft structures. Broadly, the conditions causing the difficulty may be grouped as follows: (1) anomalies or congenital modifications; (2) tumors; (3) modifications due to age, accident or surgical operations; (4) modification of the expulsive forces; (5) abnormalities of the products of conception.

Often in such circumstances cesarean section is necessary. Sometimes when tumor is present it can be removed before it interferes with delivery, but decision to excise the growth must be guided by such factors as the location of the lesion and the stage of gestation. This would determine to what extent the maintenance of pregnancy would be jeopardized by surgical intervention before term.

tumor. An ectopic or pelvic kidney, on the other hand, is much more common, as was noted by Lovelady⁷ and Krahulik.⁵

Spina bifida, especially if severe, and exstrophy of the bladder, may both modify labor. In either condition, because of faulty muscular development and disturbed innervation of pelvic muscles, vaginal delivery often leads to pronounced pelvic relaxation and even prolapsus. In spite of Lotimer's⁶ and Hinman's³ opinion that the condition of the abdominal wall, following the necessary operative procedure in the treatment of exstrophy of the bladder, presents a problem for cesarean section, it is still the preferred method of delivery in the presence of these conditions. Having seen the results of twin deliveries from below in a patient previously operated upon for bladder exstrophy and the resulting relaxation from vaginal delivery in the presence of a pronounced spina bifida, the author chose cesarean section for the delivery of the one patient in this group who had a severe spina bifida and demonstrable meningocele.

II. Tumors

In the second of the five groups are included all those patients in whom tumors were found involving any of the organs of the genital tract and of the bladder, rectum and retroperitoneal tissues of the pelvis. Both Lovelady⁷ and Melody⁸ have discussed the tumors that are found in the space behind the

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rectum and anterior to the sacrum, including those of neurogenic and myogenic origin as well as fibromas. Both of those investigators stressed the technical difficulties encountered in removal of such tumors. No tumors of this nature or any involving the rectum or bladder were noted in the past six years on the Obstetrical Service at Children's Hospital.

Of the tumors involving the genital tract, none were noted of the vulva in this particular group which actually caused dystocia. There was one patient, however, who was delivered on three occasions from below in the presence of a rapidly progressing kraurosis and other epithelial changes of the vulva. Because her mother and aunt had both died of carcinoma of the vulva, a simple vulvectomy was done following the last delivery. Since then, the patient has not conceived.

A fairly large cyst of the vagina was found in another patient on whom cesarean section was advised. Following aspiration of the cyst, however, the patient was delivered at term without difficulty from below. Unfortunately, the baby died and the patient did not return for removal of the cyst.

Of the lesions of the cervix, carcinoma was noted only once in association with pregnancy. (As the pregnancy happened to be ectopic, it is not included in this particular group.) There were, however, four patients with fibroid tumors involving the cervix. All required cesarean section at term.

The most common tumors of the uterus itself which can result in dystocia are fibroids. They may be of pedunculated, subserous or intramural type. Even submucous fibroids are not incompatible with pregnancy in occasional patients. Whereas two decades ago myomectomy was done routinely during pregnancy, the present attitude is to let such tumors alone until after delivery. In many cases myomas involute to an even smaller size following the termination of the pregnancy. Exceptions to this general rule against removal during pregnancy, of course, are cases in which the tumors create some complication such as pain due to extensive necrosis during pregnancy. In such circumstances immediate removal is indicated.

There were 18 patients in the present series in whom fibroids were the cause of dystocia. Four of them were delivered from below, following difficult labors. The remaining 14 were delivered by abdominal cesarean section, and five of the 14 had hysterectomy also. One of the two patients in whom submucous fibroids were found during the puerperium was observed within a few hours after delivery with a diagnosis of uterine inversion.

Most common of the adnexal tumors associated with pregnancy and potential causes of dystocia are simple cystomas, either of ovarian or parovarian origin. Next in frequency are dermoid cysts either

of one or of both ovaries. Although rare, pseudomucinous and serous cysts, along with other malignant tumors of the ovary, do occasionally occur with pregnancy and should, therefore, always be kept in mind in the presence of dystocia due to ovarian enlargement. Finally, occasionally an ovarian fibroid may be found to be the cause of dystocia during labor.

Whenever an adnexal tumor of either solid or cystic type is found in early pregnancy it should be removed, especially if it is pedunculated, or freely movable. As there is possibility that the ovary, containing the corpus luteum, might be removed in the procedure, it has heretofore been taught that such operations should be postponed until after the twelfth week. However, in view of the recent work of Koff and Tulskey⁴ especially, it would seem that the corpus luteum is not essential to maintain pregnancy in humans. Of eight patients scheduled for therapeutic abortion by Koff and Tulskey, seven carried on in spite of removal of the corpus luteum within the first few weeks of pregnancy. Certainly, operating before the twelfth week of pregnancy in patients with ovarian tumors has definite technical advantages.

Many of the cysts, however, may either be missed or develop during pregnancy to a size sufficient to cause dystocia at the time of labor. There were five patients in the present group in whom cysts were found, requiring cesarean section at term with accompanying cystectomy. In four instances single simple cysts of ovarian origin were found and removed. In the fifth patient, large cystic ovaries were observed at cesarean section, resulting from excessive hormonal stimulation by an unusually large placenta with twin pregnancy. The patient had fulminating pre-eclamptic toxemia, because of which immediate cesarean section during the seventh month was deemed advisable. Unfortunately, at the time of operation, signs of hemorrhage, probably the result of partial torsion, were observed in the left ovary, necessitating its removal. The right ovary was left intact and upon examination six weeks postpartum it was found to be involuted to normal size. It is worthy of note that this particular patient became pregnant again.

III. *Modifications Due to Age, Accident or Surgical Operation*

Included in a third group are all patients in whom the soft tissues have been modified, by age, accident or surgical treatment, enough to create dystocia. Among the patients in the present series in whom the extragenital tissues were involved in such modifications were those with excessive perineal rigidity resulting from muscular hypertrophy, calcification of that area, infection, burns, etc. One was a dancer with unusual perineal muscular development of such nature that the pelvic outlet was severely contracted

and cesarean section was necessary. Another patient had actual calcification of these same muscles as a result of horseback riding. Still another patient with excessive keloid formation resulting from extensive burns covering the lower abdomen and perineum was also delivered vaginally with some difficulty.

Enterocoele, cystocoele and rectocoele rarely give trouble during delivery since they are usually associated with well relaxed pelvic tissue. The same is true of uterine prolapse. However, if there has been extensive repair of any or all of such lesions, delivery by cesarean section is the method of choice. This was the method of delivery of nine of ten patients with such conditions in the present series. The tenth delivered from below before she could be moved to the surgery with resulting excessive lacerations of the repaired tissues.

Of three patients in the genital group with extensive vulvar and vaginal varicosities, two were delivered uneventfully from below. The third because of the severity of the varicosities was delivered by cesarean section, and sterilization then was carried out.

Dystocia may occur in the presence of scarring and atresia of the vagina as the result of trauma and infection. Vaginal hematomas may also occasionally occur before delivery, either spontaneously or as the result of trauma. However, in the present group hematomas occurred only after delivery.

Although true cervical dystocia as a distinct entity is a moot question, occasionally in an elderly primipara the cervix can definitely be found to be a rigid resistant structure. Cervical dystocia may also be the result of hypertrophy, edema and strictures. It may follow trachelorrhaphy or cervical amputation, although these operations rarely are carried out in the child-bearing period today. It can also be the result of extensive cauterization and conization—procedures that are condemned by many obstetricians for this reason.

There were 71 patients in the group under consideration in whom cervical dystocia was noted. Twenty-five of them were delivered by cesarean section and the remaining 46 from below with the aid of forceps. Manual dilatation was employed in the delivery of four patients delivered by forceps, and for another 25 patients in the group Dührssen's incisions were necessary before delivery could be completed.

Fortunately, ventral fixations and interposition operations are procedures rarely done nowadays on patients in the child-bearing years. There were no patients in whom any such procedures had been done in this group. There was but one patient with a previous suspension and she delivered uneventfully.

There is considerable controversy regarding the method of delivery of a patient upon whose uterus

extensive myomectomy or myomectomies have been done. There were four such patients in this group and three of them were delivered by cesarean section. The other, who had had a rapid, easy labor during a pregnancy previous to myomectomy, delivered uneventfully from below.

IV. *Modification of the Expulsive Forces*

Two more groups which involve only tissues of genital origin have been added to this discussion of soft tissue dystocia. The first of these includes all patients in whom sufficient modification of the expulsive forces had occurred to result in a definite disturbance of normal labor.

The first and most important of these modifications is uterine inertia. There were 42 patients in whom this occurred in the Children's Hospital group. Of these, 22 were delivered by cesarean section—16 of them not until after induction in some form had been attempted. As elsewhere expressed by the author, there is little question that a substantial proportion of these patients might have delivered from below if labor had been allowed to establish itself spontaneously.

The second of the modifications of the expulsive forces is the so-called contraction or Bandl's ring. There were four patients in whom this condition was found. Two delivered from below, one with the help of Dührssen's incisions of the cervix. The remaining two were assisted by cesarean section. It is well to bear in mind that, even with deep anesthesia, a ring of this nature may persist and necessitate a longitudinal uterine incision at the time of the cesarean section in order to deliver the baby.

Uterine rupture is another cause of modification of expulsive forces of the uterus. It must be kept in mind in the presence of sudden acute abdominal pain associated with pronounced change or cessation of the uterine contractions during labor. Although there were no cases of uterine rupture in the present group, two such cases were observed elsewhere by the author during the six-year period covered by this report. One occurred in the scar of a classical cesarean section and one in the scar of a low transverse cesarean section. Both occurred in patients in which the onset of labor was premature. In both cases hysterectomy was necessary.

The fourth causative agent in this group is acute polyhydramnios. There were only four patients in the present series in whom this condition occurred. All delivered from below. In one, early relief was sought by paracentesis through the abdominal uterine wall. Although some 4 liters of amniotic fluid were withdrawn, the patient promptly went into premature labor.

V. *Abnormalities of the Products of Conception*

In the fifth and last of these groups are included all factors involving the fetus, the cord or the pla-

centa which might modify the ensuing labor. Amongst them is the transverse presentation of the fetus. Compound presentations are also included. There were two cases of the former in the present series and both patients were delivered by cesarean section. There were no patients in this particular group with compound presentation. Soft tissue abnormalities of the fetus of various types may interfere with normal delivery. For the one patient in the series in which this occurred, cesarean section was necessary in spite of an adequate pelvis. At section, the breech was found to be the presenting part and it was prevented from dilating the cervix or engaging in the pelvis by numerous loops of fetal bowel which completely covered the internal os. These loops were found to have herniated through a large defect in the abdominal wall of the fetus and to have become thickened by exposure to the amniotic fluid.

Placental causes may occur as abnormalities. This is especially true of unusual sites of implantation. The most common of these is placenta praevia of which there were 17 cases in this group. For five patients in whom the placenta only partially covered the internal os, vaginal delivery was the method of choice. Of 12 patients with central placenta praevia, however, 11 were delivered by cesarean section; and in the one case in which cesarean section was not done the condition was not recognized until after delivery of the fetus. It was found that the latter had ruptured through a thinned-out placenta with practically no associated bleeding. Of the remaining 11 patients, one had an associated ovarian cyst filling the posterior cul-de-sac while another had an associated placenta accreta requiring complete hysterectomy.

Although rare, occasionally tumor of the placenta may cause dystocia. There were no cases of the kind, however, in the present group.

Lastly, but of extreme importance, are disturbances of the umbilical cord. There were three patients in this group in whom prolapse of the funis occurred early in the first stage of labor. All were delivered successfully by cesarean section with no fetal deaths.

Next in interest is the short or shortened cord which may either prolong labor or result in the death of the infant. Out of 171 patients in whom such a shortened cord was noted in a recent three-year period at Children's Hospital, there were only 15 in whom the cord was shortened so much as to cause clinical symptoms with modified labor. In one of these cases cesarean section was necessary and two ended in intrauterine death of the fetus.

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The Use of Silicones in Dermatology

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AMONG THE MORE SIGNIFICANT topical preparations that have appeared in the dermatologic field during recent years are the silicone-containing agents. The pronounced ability of these dimethylsiloxane polymers to repel moisture while remaining inert, non-sensitizing and nontoxic^{2, 15, 16} has given impetus to widespread acceptance and use. Numerous commercially available preparations, ranging in silicone content from 2 per cent to 55 per cent, have been found of value in the treatment and prevention of diseases of the skin associated with prolonged exposure to moisture, soaps and detergents, irritating body discharges and certain allergens and chemicals.^{4, 12, 20}

Among cutaneous conditions reported as benefited by silicone preparations are soap-water-detergent dermatitis of the hands (housewives' eczema, "dish-pan hands"), contact dermatitis due to primary irritants and specific allergens, "diaper rash," perifistular dermatitis, chapping of lips, hands and face, angular stomatitis not due to vitamin deficiency,¹³ pruritus of the vulvae and the anus secondary to body discharges and atopic dermatitis due to contact factors. Many persons consider the silicone preparations now in use to be cosmetically objectionable. In addition, in view of the nature, pathogenesis and sequelae of many of the diseases of the skin treated with silicones, it would seem desirable to combine the repellent properties of the material with a keratolytic agent and a bactericide, thereby broadening the therapeutic scope.

A consideration of housewives' eczema or "dish-pan hands," the most common of all "industrial" dermatologic diseases, will serve to illustrate the desirability of a multiple-acting topical application. It is generally agreed that numerous background factors such as increased capillary permeability, allergy, atopic states, psychosomatic factors, endocrine disturbances, focal infections, avitaminosis and seasonal change may predispose certain persons to dermatitis of this type.^{7, 18, 19} However, it is likewise accepted that the defatting action of soap, water and detergents, coupled with the alkalinity of

• *A cosmetically acceptable lotion containing a silicone protectant, a keratolytic, a bacteriocidal agent and antipruritic substances, was clinically tested in 208 persons with various dermatoses.*

Twenty-four-hour closed patch tests on humans and intradermal tests in laboratory animals indicate the lotion not to be a sensitizer.

Subacute and chronic housewives' eczema and contact dermatitis of the hands, uncomplicated "diaper rash," periaural dermatitis due to excessive moisture, and certain hyperkeratotic dermatoses responded satisfactorily to the use of the lotion.

soaps, most frequently precipitate housewives' eczema.^{5, 9} In addition to the soap, water and detergent effects already mentioned, Van Scott and Lyon²¹ demonstrated that detergents cause the loss of sulfhydryl groups from the keratin molecule, thereby altering the previously compact keratin structure and diminishing its inherent powers of protection. Sutton and Ayres and others pointed out a similar effect from alkalies such as soaps.^{6, 19}

Once dermatitis of the hands is established, an endless variety of physical, bacterial and chemical agents can maintain the process despite removal of the original offending agents. As sequelae, pathologic changes in the epidermis and cutis consisting of erythema, thickening, scaling, fissuring, peeling and dryness or chapping frequently occur. Secondary infection is not an uncommon complicating factor. Frequently pruritus, stinging and burning are symptomatic accompaniments of the dermatitis. In view of these multiple pathologic sequelae of housewives' eczema, it would seem that protection from the offending agents alone is not sufficient and that a broader therapeutic approach is desirable to speed recovery.

MATERIALS AND METHODS

In view of the above considerations, a cosmetically acceptable lotion* was prepared containing the following ingredients: silicones (Dow-Corning 200 or 555) 1.5 per cent; glyoxyl diureide, 0.2 per cent;

*Marketed under the name Silicare,® a product of the Pharmacal Division, Revlon Products Corporation.

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camphor, 0.1 per cent; menthol, 0.1 per cent; hexachlorophene, 0.25 per cent; in an ethanolamine stearate lotion.

The inclusion of a substance that would favorably affect the keratin layer of skin, promoting healing by epidermal stimulation and debridement of necrotized superficial keratin, should be a valuable adjunct in topical therapy of the kind of dermatitis under discussion. Such a substance is thought to be present in glyoxyl diureide, a uric acid derivative.

Although McAllister,¹⁰ as early as 1912, described the healing effects of this substance, it was Robinson's¹⁴ publication in 1935, showing the active ingredient of live maggot therapy to be glyoxyl diureide, that gave impetus to the use of this chemical in this country. He found this material to exert definite healing properties, to be inexpensively made, stable and nonirritating. Ayres, Anderson and Taylor¹ demonstrated the applicability of maggot therapy and its associated glyoxyl diureide production in dermatologic conditions involving chronic ulcerative or granulomatous processes. Mecca¹¹ in a review article cites the digestive action of glyoxyl diureide as well as its cell-proliferant properties. Greenbaum⁸ demonstrated the leukocytogenic property of the chemical following systemic administration and believed its topical healing action to be due in part to a locally-produced leukocytosis.

Because of the incidence of secondary infection in dermatitis, it was deemed desirable to combine a relatively nonsensitizing and effective bacteriocidal agent into the silicone-glyoxyl diureide preparation. Hexachlorophene^{3, 17} in one-fourth per cent concentration was selected for this purpose.

To help control the pruritus, burning and stinging that so often accompany eczema of the hands, small amounts of camphor and menthol were added to the formula. Studies were then begun to determine the value of such a preparation in certain dermatologic conditions.

TOXICITY AND SENSITIZATION STUDIES

Preliminary investigation of the lotion in laboratory animals consisted of topical applications for 21 days, vaginal instillations for a similar period, intracutaneous sensitization tests and instillations into the eyes. None of these studies revealed evidence of significant irritative phenomena or tissue injury on macroscopic and/or microscopic examination. No sensitivity could be produced after 20 days of intracutaneous injections followed by a two-week rest period and then reinjection. In 24-hour closed patch tests with three materials—a lotion containing Dow-Corning 200 silicone, a lotion containing Dow-Corning 555 silicone, and Dow-Corning 555 alone—on the arms of 217 human subjects, there were no positive reactions. Eye instillation studies indicated the

TABLE 1.—Occurrence of eye irritation (0.1 ml. instillation each eye)

Rabbit No.:	1	2	3	4	5	6	7	8	9	10
Time										
1 hour.....	+	*	0	+	+	+	+	0	0	0
24 hours.....	0	0	+	0	0	0	0	0	0	0
48 hours.....	0	0	0	0	0	0	0	0	0	0

* Positive reaction—hyperemia of conjunctiva.

TABLE 2.—Results of use of materials in treatment of dermatitis of hands

	No. of patients	Complete healing	Results Partial healing	No healing
<i>Housewives' Eczema</i>				
1. Defatted, chapped.....	74	69	5	....
2. Defatted with active dermatitis	35	26	8	1
Subtotal	109	95	13	1
<i>Contact Dermatitis</i>				
1. Subacute	24	19	3	2
2. Chronic	14	7	5	2
Subtotal	38	26	8	4
Total	147	121	21	5

lotion had singularly little irritating effect on that organ (Table 1). Bacteriocidal activity was demonstrated by the complete suppression of growth of four test organisms after a five-minute exposure of 0.1 cc. each of pure culture to 1 gm. of the lotion tested.

CLINICAL MATERIAL AND RESULTS

Suitable subjects for this study were selected from patients treated in a clinic, in private practice and in hospitals and from hospital employees of various occupations. The use of the lotion was studied in subacute and chronic phases of dermatitis only. Previous experience with silicone preparations had established these agents to be not only ineffective, but at times poorly tolerated in many acute weeping eczematous processes. While a total of 306 subjects were given the lotion, only 208 are reported upon here because of inadequate follow-up in 98 instances. Duration of treatment ranged from a few days to several months.

Housewives' eczema, "dishpan hands," was the largest single category in this study, 109 subjects participating. The patients were selected on the basis of history and clinical observations. Their hands were characterized by varying degrees of erythema, roughness of texture, defatting, cracking, scaling, fissuring, lichenification and accompanying discomfort. In all cases the disease was in the subacute or chronic phase. An arbitrary classification placed these patients in two groups. The first consisted of subjects with mild dryness, redness and/or scaling. The second group was composed of persons with

TABLE 3.—Occupational distribution of hand dermatitis

	No. of patients	Complete healing	Results—Partial healing	No healing
Housewife	38	33	3	2
Kitchen employee	21	18	3	...
Professional housecleaner	19	15	3	1
Laundry worker	13	12	1	...
Nurse and aide.....	23	17	5	1
Seamstress	3	1	2	...
Laboratory technician.....	4	3	1	...
Miscellaneous	26	22	3	1
Total	147	121	21	5

TABLE 4.—Results of treatment of other kinds of dermatosis

	No. of patients	Complete healing	Results—Partial healing	No healing
<i>"Diaper Rash"</i>				
1. Uncomplicated	19	18	1	...
2. Complicated	12	2	1	9
Total	31	20	2	9
Angular stomatitis, cheilitis, cheilitis and "saliva eczema"				
	14	11	2	1

the same conditions but of greater intensity and accompanied by fissuring, thickening and lichenification. Results of treatment are shown in Table 2. It was noted that in patients with an extreme degree of dryness and fissuring only slight improvement was noted until a supplementary emollient was prescribed to be used nightly. These patients then made rapid progress, but the results obtained after the addition of the emollient are not included in this study.

All the 38 patients with contact dermatitis of the hands other than housewives' eczema (Table 2) were kept at their work while using the lotion and 26 of the 38 had satisfactory improvement despite continued exposure.

Occupational classification of the subjects with dermatitis of the hands and the response obtained are shown in Table 3.

Results of use of the lotion in treatment of 31 infants with "diaper rash" and of 14 patients with angular stomatitis, cheilitis and/or "saliva eczema" are shown in Table 4.

Seven patients with atopic dermatitis were treated. One of them, in whom the disease was caused by a specific allergen, had partial healing. Of six cases due to undetermined allergens, one responded with complete healing, three partially improved and two did not heal. Of three patients with numular eczema, one had partial improvement and two had none.

Six persons with follicular hyperkeratosis or hyperkeratotic dermatoses were treated, of whom two had complete healing and four had partial healing. However, all these patients had been under treatment for only two to three weeks, and the response

elicited was striking. This group will be considered further.

DISCUSSION

In evaluating the results obtained in dermatitis of the hands, it must be borne in mind that a large proportion of the cases treated were of a mild degree of involvement that ordinarily would not cause the patient to seek a dermatologist's help. However, such cases make up the largest single group of "industrial" dermatoses and are the forerunners of most instances of severe and disabling dermatitis of the hands. The significance of clearing housewives' eczema before more severe pathological change occurs is obvious. To this end, the role of the lotion studied is conclusively demonstrated. The cosmetic acceptability of the preparation was frequently commented upon; particularly as to the nongreasy, non-sticky and invisible characteristics. Antipruritic properties were observed in many instances, sometimes due to the healing effected and at other times due to the immediate application.

One of the more striking effects observed was the rapidity with which hyperkeratinization, as evidenced by roughness, scaling and thickening disappeared. This characteristic evoked frequent spontaneous comment from patients. As was previously noted, persons with an extreme degree of dryness or pronounced fissuring had only partial improvement until an emollient was prescribed as a supplementary nightly treatment. Evaluation of these patients for this study was based only on response up to the time the emollient was added. Most of the instances of "partial improvement" in dermatitis of the hands were in patients whose skin remained excessively dry.

Tolerance to the lotion was extremely good, with only a few instances of irritation. This occurred mostly in the complicated "diaper rash" group. Secondary infections, concomitant atopy, and severe, although subacute, dermatitis made up most of the complications.

The results obtained in "saliva eczema" due to drooling, licking, thumb-sucking and lip-biting, indicate the lotion to be of considerable value in treatment and prevention.

The findings in the very small group of patients with atopic dermatitis studied were inconclusive. Unsatisfactory response of numular eczema was observed in the three cases treated.

One of the more interesting observations made in this study was the effect of the lotion upon keratosis pilaris and other hyperkeratotic states. One of the participating pediatricians prescribed the lotion for a six-year-old patient who had an extreme degree of ichthyosis and keratotic plugging on the arms, thighs and legs. After one week of therapy, a decided

change was noted, and by the end of the second week improvement was pronounced. In all, six patients with hyperkeratotic dermatoses were treated, with two completely healed and four having partial but decided improvement. Further investigation along this line is being carried out.

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The authors wish to express appreciation to Drs. H. Bernstein, D. Goldstein and A. Grossman for their participation in the pediatric aspects of this study.

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Management of Resectable Lesions Of the Small Bowel

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THE IMPORTANCE of the management of resectable lesions of the small intestine has been accentuated by a study of 364 cases in which resection and anastomosis of the small bowel was done at the Los Angeles County General Hospital between 1940 and 1952. Two hundred fifty-one of the operations were done because of intestinal obstruction and 113 were done in cases in which there was no obstruction.

OBSTRUCTIVE LESIONS

The kinds of obstructive lesions that necessitated resection are shown in Table 1. The overall mortality rate (36.25 per cent) seemed unduly high, but it compared favorably with data given in many other studies. For example, Nemir³ from the University of Pennsylvania reported a mortality rate of 37.5 per cent in resections done for intestinal obstruction caused by hernia. It must be remembered that most of the patients with such lesions have gangrenous bowel, are critically ill and are brought into a large charity institution in grave emergency. Certainly complicated cases of intestinal obstruction necessitating bowel resection demand the most mature surgical judgment and delicate surgical technique.

In about half the cases of hernia in the present series the rupture was through the femoral canal. Such lesions frequently are handled most easily through an extraperitoneal midline suprapubic incision known as the Henry approach. With this approach it is relatively easy to enter the peritoneal cavity, resect the gangrenous bowel and hernial sac without opening the sac and then carry out aseptic anastomosis.

Incarcerated and strangulated umbilical hernias are notoriously difficult to handle.⁵ The mortality for resection of the small bowel in this series was 75 per cent. Of the last six patients in this series who had gangrenous bowel in an umbilical hernia only one survived resection. Patients with this condition are often obese and have less than normal vital capacity. Umbilical hernias are usually loculated and so large that the bowel has lost its right of domicile in the peritoneal cavity. After the gangrenous bowel has been resected it may be better merely to close

• During a 12-year period at the Los Angeles County General Hospital there were 364 cases of resection and anastomosis of the small intestine which were classified and studied. Particular attention was paid to the methods of anastomosis. There were more wound infections, fistulas and otherwise faulty anastomosis with the open than with the closed technique. In the presence of a peritoneal cavity not previously contaminated by bowel content, a closed anastomosis is better and safer than an open anastomosis.

the hernial sac and fascia loosely and leave repair of the hernia to a later date.

Hugely dilated loops of bowel filled with gas and fluid are often present in small bowel obstruction. Aseptic decompressive suction enterotomy done just above the point of obstruction is a valuable procedure. It permits returning the bowel to the peritoneal cavity in a less traumatic manner and aids the bowel to regain its tone in the postoperative period. Various modifications of Wangenstein's method⁶ of suction enterotomy have been tried. The procedure is tedious and takes practice, but is worthwhile when properly done. The site of the enterotomy can be resected with the gangrenous bowel.

It is gratifying to note that resection is being used in the treatment of intussusception with a fairly low mortality rate. Resection is necessary when the intussusception is irreducible or has become gangrenous. Children with this condition are usually desperately ill; so the mortality rate of 28.5 per cent in the present series is understandable.

TABLE 1.—Obstructive lesions requiring small bowel resection

Cause	Number	Deaths	Mortality Per cent
Hernia	105	39	37.1
Adhesions	60	20	33.3
Volvulus	36	14	38.8
Metastatic carcinoma	14	5	35.7
Carcinomatosis	3	1	33.3
Small bowel tumors.....	9	4	44.4
Intussusception	7	2	28.5
Miscellaneous	17	6	35.3
Total	251	91	36.25

From the Los Angeles County General Hospital.

Presented before the Section on General Surgery at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

NONOBSTRUCTIVE LESIONS

The nonobstructive lesions in the present series are listed in Table 2. Here too the mortality rate was high (35.3 per cent).

Penetrating wounds were more common than non-penetrating wounds. It is axiomatic that all penetrating wounds of the abdominal walls (anterior, posterior, superior and inferior) require surgical exploration of the abdominal cavity regardless of the apparent insignificance of the traumatizing object and the nature and direction of the external wound. Exploratory laparotomy in a patient without abdominal visceral injury is usually tolerated very well. On the other hand, often if visceral injury is present and exploration is not done the patient dies. Non-penetrating trauma may forcefully separate the jejunum where it is loosely anchored at the ligament of Treitz or may crush the bowel between the traumatizing object and the vertebral bodies. Bosworth¹ collected reports of 1,593 cases of non-penetrating perforations and noted that the mortality rate was 56.2 per cent. In the management of "traumatic abdomens" all the viscera must be examined and the entire small bowel must be run between the surgeon's fingers. Resection is necessary when the bowel is extensively crushed, completely transected, torn from its mesentery or perforated in many places close together. Obviously, there is no reason to do aseptic anastomosis if the peritoneal cavity is already contaminated by open bowel, unless the surgeon feels such a technique is safer or more rapid in his hands. In such cases there is a tendency to eviscerate, but this usually can be prevented by closure of the abdomen with through and through steel wire retention sutures.

The mortality rate associated with resection for fistulas of the small bowel was fairly low in the present series. Pattison⁴ advocated that external fistulas be approached by an incision away from the external opening in order to avoid both the contaminated wound and the bowel adherent to the peritoneum beneath the external fistulous tract.

In mesenteric thrombosis the mortality is high whether or not operation is performed. The fact that in the present series five out of sixteen patients with resected bowel survived demonstrates that bowel should be resected if the process is not too widespread.

Joergenson and Weibel² collected data on 100 cases of tumor of the small bowel at Los Angeles County General Hospital and noted that adenocarcinoma was the most common lesion and the ileum the most frequent site of all tumors. For carcinoma, very wide resection should be done. Carcinoid tumors should be resected even though metastasis has occurred because there is some evidence that deep x-ray therapy may be of value postoperatively.

TABLE 2.—Nonobstructive lesions requiring small bowel resection

Cause	Number	Deaths	Mortality Per cent
Trauma	46	18	39.1
Metastatic carcinoma	16	5	31.3
External fistula	13	1	7.6
Internal fistula	2	0	0
Mesenteric thrombosis	16	11	68.7
Small bowel tumors	8	3	37.5
Miscellaneous	12	2	16.7
Total	113	40	35.3

TABLE 3.—Type of anastomosis

	Open	Closed
1940-47	68	90
1947-50	49	38
1950-52	87	11
	204	139

X-ray therapy should also follow resection of lymphosarcoma. Benign tumors need be resected only locally if the surgeon is sure that the tumor is benign. Otherwise wide resection should be done.

METHODS OF ANASTOMOSIS

This study was originally begun in an effort to learn the best way of making an anastomosis of small bowel to small bowel. It has been of value in demonstrating the relative merits of open and closed (aseptic) techniques of small bowel anastomosis. Anastomosis involving large bowel was not studied. Preoperative preparation with sulfonamides and antibiotics usually was not possible in the patients in the present series.

Of the three major methods of approximating the bowel, the end-to-end approximation was made 297 times, the side-to-side 64 times and the end-to-side only three times. Before the antibiotic era, surgeons were particularly careful in their operative technique. There was a tendency to favor closed anastomosis because it was relatively aseptic. In recent years there has been a definite trend toward preference for open techniques. This is shown in Table 3. At present closed anastomosis is seldom done on small bowel.

COMPLICATIONS OF ANASTOMOSIS

Since sometimes certain surgical techniques are accepted without definite proof that they are the best procedure, it is well to review results from time to time. Results of methods of anastomosis may be considered in the light of the complications encountered. One of the complications is wound infection. For fair appraisal, cases in which the peritoneal cavity has been contaminated by bowel content prior to operation, such as in gunshot and stab wounds,

TABLE 4.—Wound infections

	Open Per cent	Closed Per cent
1940-47.....	52.7	24.0
1947-50.....	33.3	25.0
1950-52.....	33.3	10.0

TABLE 5.—Complications of open and closed small bowel anastomoses

	Open	Closed
Total cases.....	204	139
Wound infections	49	19
Fistula	15	2
Faulty (noted at reoperation) ..	0	4
Faulty (noted at autopsy)	5	2
Cases excluded from total.....	9	1
Total unsatisfactory anastomoses	60 (29.4%)	26 (18.7%)

must be eliminated, and only patients who live long enough to develop wound infection can be included—a period arbitrarily set at ten days from the day of operation in this study. Wound infection in this series occurred oftener with open than with closed anastomosis (Table 4). Few antibiotics were used in the Los Angeles County General Hospital before 1947. After that date the use of antibiotics steadily increased and the incidence of wound infection decreased to some extent. Apparently contamination of the wound occurred frequently in association with both open and closed anastomosis, but roughly twice as often with the former. In 71 of 119 cases in which the bowel was gangrenous open anastomosis was done and wound infection developed in 35 cases (48.3 per cent). Closed anastomosis was done in the other 48 cases and wound infection occurred in 11 (22.9 per cent). Apparently when the bowel was gangrenous the incidence of wound infection was at least twice as great with open as with closed anastomosis.

All the complications occurring with open and closed anastomosis are summarized in Table 5. A fecal fistula denotes a bad anastomosis. The percentage of fecal fistulas occurring with open anastomosis (7.3 per cent) was five times that occurring with closed anastomosis (1.4 per cent). No patient who had open anastomosis had to be reoperated upon, but it was necessary to reoperate in four cases in which closed anastomosis was used. In two of the latter cases there was obstruction, presumably at the site of anastomosis; in another a leak had developed and in the fourth a mesenteric abscess had formed although the anastomosis itself was satisfactory.

There were 52 cases suitable for study in which autopsy was done. In 31 of them open anastomosis

had been done and in 21 closed anastomosis. In the five cases of faulty open anastomoses (Table 5) the shortcoming was leakage at the suture line in all cases, usually at the mesenteric attachment. Closed anastomosis was faulty in two cases observed at autopsy—stenosis at the suture line in both. Excluded from the total were cases in which there were complications of more than one category: For example, a case in which there was both wound infection and fistula. Nearly 30 per cent of the 204 open anastomoses were unsatisfactory, whereas fewer than 20 per cent of the 139 closed anastomoses were unsatisfactory.

DISCUSSION

This study demonstrates that considerable attention needs to be paid to the anastomosis of small bowel. It is a delicate operative procedure. Every surgeon should be able to do all types of anastomoses well. The figures in this study tend to indicate that there must be more contamination of the wound with open anastomoses in spite of the aid from antibiotics. Therefore, the surgeon may not be justified in doing an open anastomosis on unprepared small bowel when the peritoneal cavity has not been contaminated. However, wound infections and other complications occur rather often in association with both open and closed anastomosis. In closed anastomoses there were three proved failures of the anastomotic line—fistula in two cases and leakage, discovered at reoperation, in the other. There were in all 20 failures of open anastomoses, although one reason for choosing open anastomosis is to be absolutely sure of the closure particularly at the mesenteric angle. Failure of closed anastomosis occurred in four cases because of stenosis at the suture line. Stenosis did not occur in association with open anastomoses. The possibility of postoperative bleeding at the suture line is an argument against closed anastomosis. There were no postoperative hemorrhages from the suture line in the 364 cases studied.

Resident surgeons did most of these operations. In recent years the residents have shown a pronounced tendency to favor open anastomosis. The attending staff surgeons have always had a preference for the open operation. Many of the complications occurred in patients operated upon by the attending staff. Certainly they would not continue to use open anastomosis if the results were not relatively good. Nevertheless, this study raises a question. Are surgeons critical enough of their results, particularly in regard to wound infection? It is difficult for an individual surgeon to collect data on a statistically significant number of cases in which he himself has done the operation. Hence he must base his conclusions upon impressions. It would be

well for all surgeons to reevaluate their methods of small intestinal anastomosis and to concentrate on surgical technique. Surgeons must be prepared to resect bowel whenever they open the abdomen and must pay careful attention to the fundamental operative techniques, such as protection of the wound with towels, good hemostasis without causing necrosis, careful placing of sutures, particularly at the angles, gentle handling and the avoiding of spillage of bowel content.

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Intravenous Administration of Fat Emulsions

Metabolic and Clinical Studies

LAURANCE W. KINSELL, M.D., GILBERT C. COCHRANE, M.D.,
MARJORIE A. COELHO and GEORGE M. FUKAYAMA, Oakland

• Fat emulsions alone or in alternation with amino acid mixtures were administered by continuous intravenous infusion to human subjects. Adequate nutrition was maintained thereby, without untoward effects. Upon too rapid administration of such emulsions, toxic manifestations occurred, apparently referable to an "overload" of the enzyme systems concerned with fat catabolism and storage.

THE TWO MATERIALS available for parenteral feeding are sugars and protein hydrolysates. With neither of these is it possible to maintain caloric and protein equilibrium in a person who has to subsist entirely on parenteral feeding over a long period, for the unhappy choice is between giving so concentrated a solution that sclerosis of the veins results, or so dilute a solution that the patient literally may be drowned if attempt is made to administer as much as 1,800 calories daily.

The solution to the problem lies in the availability of a fat emulsion suitable for intravenous use. A variety of such emulsions have been prepared and have been evaluated in animals and humans, but have been found to be unsuitable for general clinical application because of either "breaking" of the emulsion or the presence in the emulsion of materials that are toxic to the recipient.^{1, 2, 3, 4, 5}

During the past year the authors have evaluated several small lots of fat emulsion prepared by the Research Department of Armour Laboratories. These emulsions had been shown to be highly stable, and to produce essentially no toxic manifestations in laboratory animals when infused at a reasonable rate.

Chart 1 gives data on the initial study—the infusion of 400 cc. of a 10 per cent emulsion over a two-hour period into a patient who was under study on the metabolic ward. In a clinical sense the infusion was completely uneventful. Chemically it was noted that the neutral fat content in the plasma had reached

approximately 800 mg. per 100 cc. at the end of the infusion, and that the level fell rapidly after the infusion was completed. A very slight elevation of blood ketones was also noted, and a significant decrease in the iodine number of the plasma. The decrease in iodine number presumably was referable to the dilution of endogenous plasma lipids with the infused material, which was low in unsaturated fatty acids.

The next study (Charts 2 and 3) was carried out as a two-day balance procedure in a patient who was

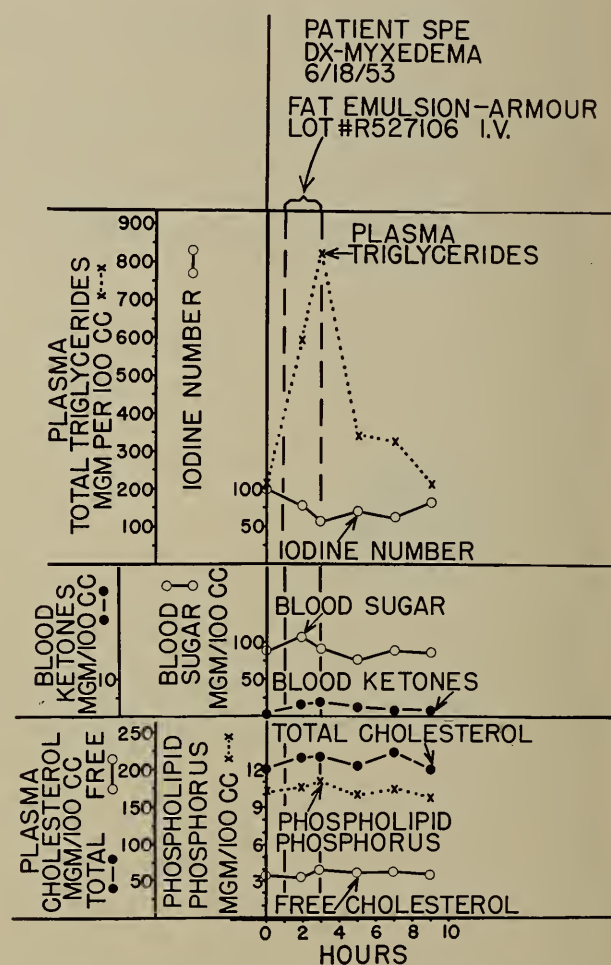


Chart 1.—Infusion of fat emulsion (20 gm. of fat per hour) for a two-hour period, brought about a rapid rise in plasma triglycerides but no untoward clinical effects.

From the Institute for Metabolic Research of the Highland Alameda County Hospital, Oakland.

Presented before the Section on General Medicine at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

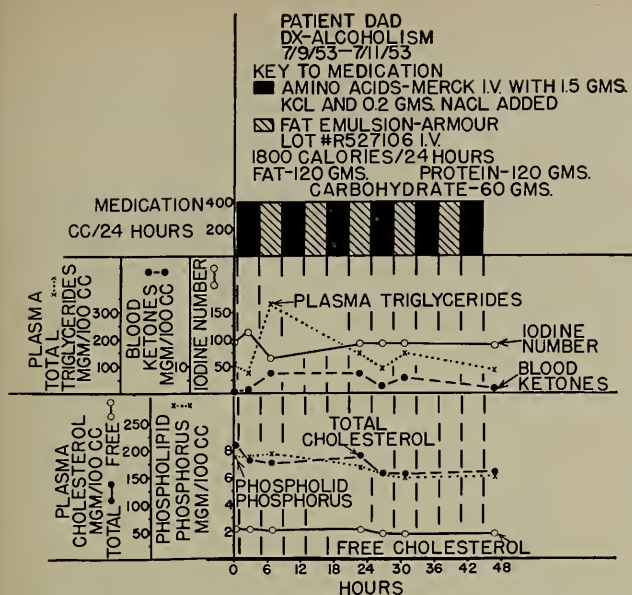


Chart 2.—Alternate infusion for four-hour periods of 100 cc. of 10 per cent fat emulsion (plus 5 per cent glucose) and 10 per cent amino acid mixture, is well tolerated clinically and biochemically.

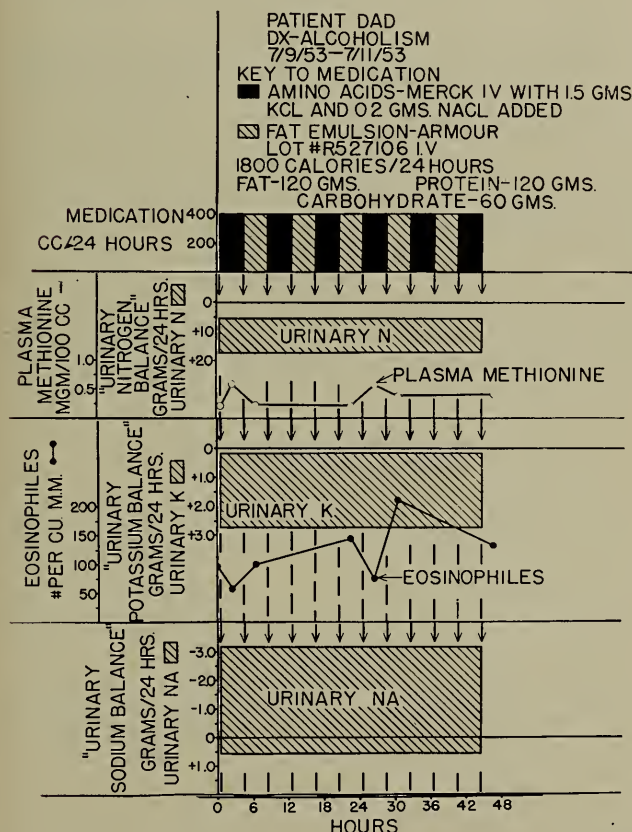


Chart 3.—The infusion referred to in Chart 2 resulted in a strongly positive nitrogen balance throughout a 48-hour period. The reason for the sodium diuresis is unknown.

recovering from an alcoholic episode. The fat emulsion was infused intermittently with a 10 per cent amino acid mixture, each being administered at the rate of 100 cc. per hour. It will be noted in the charts

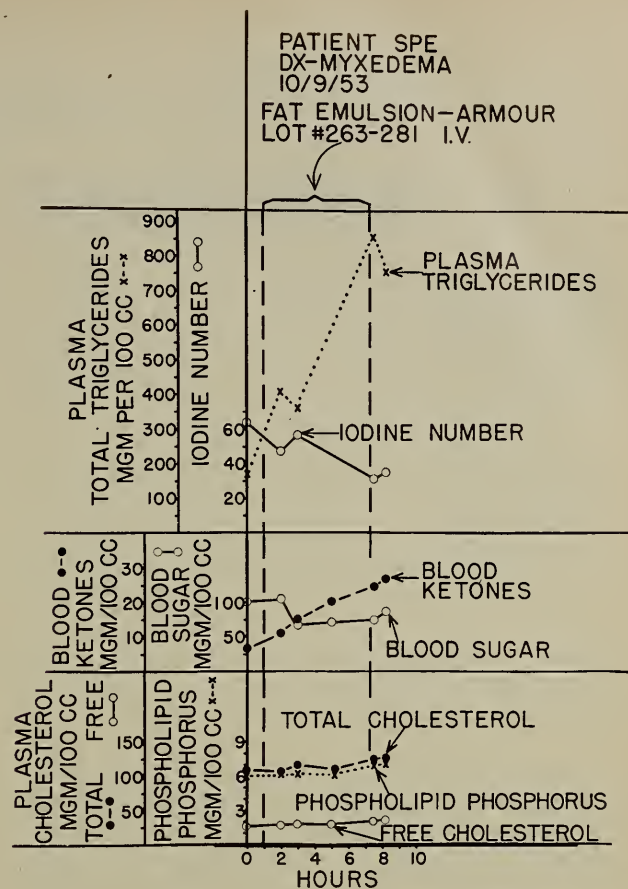


Chart 4.—Infusion of a 10 per cent fat emulsion at a rate of 20 gm. of fat per hour for a six-hour period resulted in a rapid rise in plasma neutral fat and blood ketones, and eventually in production of toxic manifestations.

that the initial rise in plasma triglycerides was followed by a fall, even though the infusion continued, apparently attributable to a "compensation" of the body machinery concerned with utilization of fat. The blood ketones rose moderately and then gradually fell. During the period of infusion, the patient received 1,800 calories per day with the distribution between fat, protein and carbohydrate as shown. He was in strongly positive nitrogen balance throughout.

The next study (Chart 4) was carried out on the patient who received the initial infusion. The fat emulsion was infused at a rate of 200 cc. per hour throughout a six-hour period. Nausea, vomiting and some low back pain began approximately an hour after the infusion was completed, and continued for two hours. Temperature elevation appeared during the infusion and continued for several hours thereafter. It will be noted that under these conditions the blood ketones rose rapidly to levels of approximately 25 mg. per 100 cc. and the triglycerides to values above 800 mg. per 100 cc.

The final study (Charts 5 and 6) was of a three-day balance in an elderly man with osteoporosis. The infusion was carried out as in the first balance procedure, at the rate of 100 cc. per hour, with the

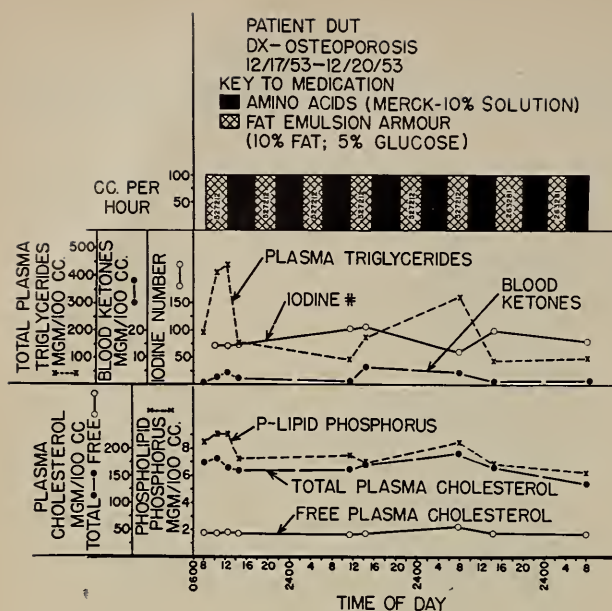


Chart 5.—Infusion carried out as in Chart 2 for a three-day period in an elderly patient was well tolerated clinically and biochemically.

amino acid mixture and fat emulsion alternating. The pattern with regard to plasma triglycerides and blood ketones as well as clinical status was essentially identical with that noted in the initial balance study. The patient was in positive nitrogen balance throughout.

DISCUSSION

From the foregoing, it appears that the infusion of a properly prepared fat emulsion in human subjects can result in maintenance of adequate nutrition without untoward effects. It further appears that too rapid administration of such an emulsion results in toxic manifestations, which presumably are attributable to an accumulation of fat in abnormal locations. Interference with essential metabolic processes results. Additional work will be required to determine the minimal, maximal and optimal tolerance in terms of grams of fat per kilogram of body weight. On the basis of clinical and biochemical data so far available, the infusion of 20 grams of fat per hour for six hours exceeds the tolerance of an adult

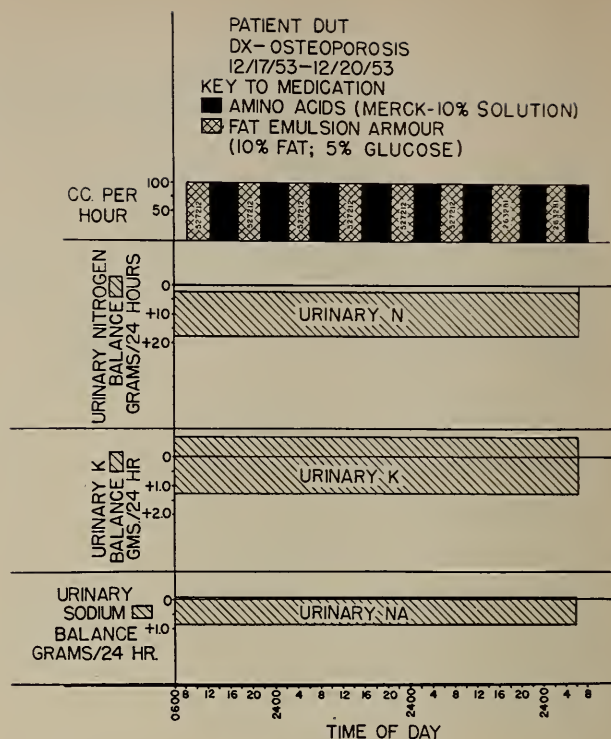


Chart 6.—Three-day parenteral feeding with alternate fat emulsion and amino acid solution resulted in a positive nitrogen balance. Potassium loss may have been related to increased urinary output.

of average size, but 10 grams per hour is well tolerated.

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Progress in Blood Preservation

FREDERICK PROESCHER, M.D., and JEAN NOLAN, San Jose

THE PRESERVATION of erythrocytes *in vitro* for long periods has long been a problem. Present methods of preservation are inadequate for storing sufficient blood to cope with any large scale emergency. The great demand for stored blood during World War II stimulated the search for more efficient preserving media.

Sodium citrate, introduced in 1914, is the most widely used anticoagulant for blood even though it has been demonstrated to be one of the poorest preservatives. This was first recognized by Rous and Turner¹¹ who added glucose to sodium citrate to prolong the lifetime of erythrocytes *in vitro*. A variety of modifications of the original citrate-glucose media have since appeared and at present citrate-citric acid-glucose solution (ACD) is preferred. The usefulness of stored blood preserved with ACD solution is limited to two to three weeks.

Dyckerhoff⁴ and co-workers, in search of more powerful anticoagulants for blood, investigated a number of new synthetic organic substances. The compounds investigated were the potassium and sodium salts of esterified sugar acid, the sodium salt of diglycolic acid, the sodium salt of esterified tartaric acid, esterified sorbite and ethylenediamine tetraacetic acid (EDTA). The latter was the most powerful.

CHEMISTRY

Ethylenediamine tetraacetic acid* is a polyamino-carboxylic or unnatural amino acid (Figure 1). It is a solid white substance with a melting point of 240° C. It is almost insoluble in either cold or hot water. It is soluble in hot formamide, from which it may be crystallized on cooling. It is also soluble in 5 per cent or stronger mineral acids (hydrochloric, sulfuric) but not in organic acids (acetic, etc.). It is a tetra-basic acid. EDTA forms a series of di, tri and tetra sodium and potassium salts. These salts are insoluble in organic solvents and have a limited solubility in aqueous alcohol. The EDTA alkali salts are relatively stable compounds and are odorless and tasteless. The crystalline acid and sodium salts are

• *Disodium ethylenediamine tetraacetate (Na₂EDTA) is a powerful anticoagulant for blood. It preserves the cellular elements of the blood better than the anticoagulants commonly used. It is practically atoxic and almost completely excreted.*

Blood preserved with the disodium ethylenediamine tetraacetate is useful for transfusion after storage of three to four weeks. The addition of glucose and raffinose increases the survival time of the erythrocytes for from four to six weeks.

The disodium calcium complex may be used for the preservation of whole blood. It is completely atoxic.

Ethyl alcohol-saline-sugar solutions preserve erythrocytes for at least 150 days; they are excellent preservatives for the agglutinogens.

Whole blood preserved with glycerin-raffinose-glucose may be frozen at —20° C. for at least two months, and probably for a longer period, without excessive hemolysis after thawing.

nonhygroscopic. They are stable on prolonged heating at 150° C. although the hydrates will lose water of crystallization over 100° C. The aqueous solutions of the EDTA salts do not hydrolyze or deteriorate. They are noncolloidal, chelating or complexing agents resembling the polyphosphates. They deionize alkali cations and heavy metals, or in other words are water soluble ion exchangers. The most interesting and valuable property of EDTA is its ability to form strong nonionized soluble chelate complexes with divalent cations including calcium, magnesium, barium, strontium, rare earth metals (radium, polonium), copper, cadmium, cobalt, zinc, lead, manganese and nickel. Complexes are also formed with trivalent metal ions such as aluminum, iron, chrome and vanadium.

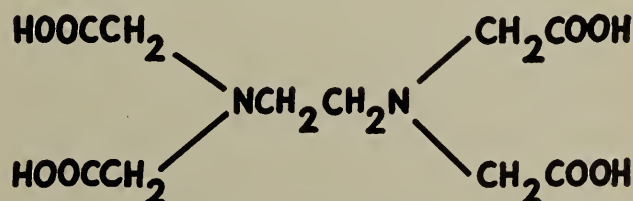


Figure 1.—Formula for ethylenediamine tetraacetic acid.

From the Santa Clara Valley Blood Center, San Jose, California.

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*Ethylenediamine tetraacetic acid is manufactured by the Alrose Chemical Co., Providence, R. I., under the trade name "Sequestrene" and by the Bersworth Chemical Co., Framingham, Mass., under the trade name "Versene."

Disodium calcium ethylenediamine tetraacetate (Na_2CaEDTA) is water soluble and only slightly alkaline. Calcium occurs as part of a complex anion and is bound so securely that it no longer exhibits any of its characteristic cationic properties. It does not, however, give any characteristic tests for calcium, no precipitate with phosphate, carbonate, hydroxide or even with oxalate, the most sensitive test for calcium.

Recently Na_2CaEDTA has been used successfully in the treatment of metallic poisonings (lead, beryllium, vanadium) and therapy for injury from radioactive substances. The magnesium complex gives promising results for the treatment of hypertension. The structural formula is shown in Figure 2.

When EDTA became available in this country, a reinvestigation of its anticoagulant and preservative properties for blood was made. The results did not confirm Dyckerhoff's conclusion that EDTA was no better than sodium citrate; besides its powerful anticoagulant effect the cellular elements of the blood were found to be better preserved than with sodium citrate, heparin or the oxalates. These observations were recently confirmed by Wittgenstein,¹⁷ Hadley and Larson⁵ and Schmidt¹² and co-workers.

Three alkali salts of EDTA are now available, di(Na_2), tri(Na_3) and tetra(Na_4) sodium salts. The disodium salt (pH 5) is preferred, but the trisodium salt (pH 8.5) is also suitable as an anticoagulant. The tetrasodium salt (pH 12) is too alkaline and it is hemolytic.

EFFECT OF MINIMAL QUANTITIES OF Na_2EDTA ON WHOLE BLOOD

Quantities of 0.5 mg. to 1 mg. of Na_2EDTA will prevent 1 cc. of human blood from coagulating. In this respect it is ten times more effective than sodium citrate. The anticoagulant effect is due to the binding or chelating of the blood calcium. It is easily soluble in blood and may be added in solid form, or may be dissolved in distilled water or, better, in an 0.85 per cent sodium chloride solution. Five one-hundredths to 0.1 cc. of a 10 per cent solution is sufficient to prevent 5 cc. of blood from clotting. The aqueous solution in a concentration of 4.5 per cent is isotonic for human blood; it has a pH of about 5. The hemoglobin and its oxygen combining power is not impaired by Na_2EDTA . Blood preserved with 0.3 per cent Na_2EDTA only showed traces of methemoglobin after storage of 52 days at 4° C. The electrophoretic pattern of the plasma proteins is not changed. The proteins are not precipitated by Na_2EDTA . The dried plasma of blood preserved with Na_2EDTA is readily soluble in normal saline solution. The hemagglutinogens are well preserved for at least four weeks, if blood is stored at 2 to 4° C. Zuker¹⁸ recently reported that the prothrombin time of Na_2EDTA treated plasma, after optimal recalcifi-

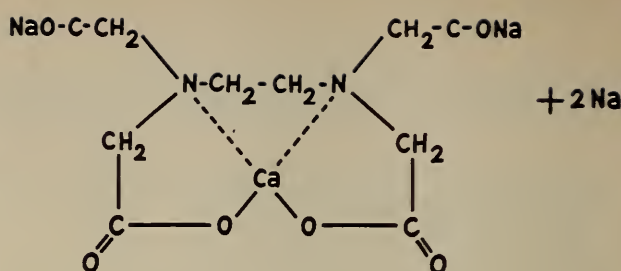


Figure 2.—Formula for disodium ethylenediamine tetraacetic acid.

cation, is longer than that of oxalated plasma. Clot retraction occurs in the usual manner in the presence of platelets. In the two-stage prothrombin determination in which plasma is considerably diluted, normal values are obtained. This finding and the prolonged recalcification time may be attributed to the effect of Na_2EDTA on the thrombin-fibrinogen reaction.

Considerable individual variations were observed in the preservation of the cellular elements of the blood. The following findings are only approximate values. There is a wide variation of spontaneous hemolysis with different bloods. Spontaneous hemolysis occurred in Na_2EDTA -preserved blood from 168 healthy donors in a minimum of seven days and a maximum of 30 days. The polynuclear leukocytes showed little change after 24 hours; about 30 per cent showed more or less pronounced destruction of the nuclei after three days, while the neutrophilic, eosinophilic and basophilic granules were still stainable. The peroxidase reaction of the granules remained positive for several weeks. The monocytes disappeared after four to five days. The lymphocytes were most resistant and could still be identified in stored blood after several weeks.

PRESERVATION OF BLOOD WITH VARIOUS CONCENTRATIONS OF Na_2 , Na_3 AND Na_2CaEDTA

Whole blood preserved with 0.05 to 0.5 per cent Na_2EDTA aqueous solution and stored for 42 days at 4° C. showed erythrocyte survival of 70 to 88 per cent. Blood collected in solid Na_2EDTA in concentrations of 0.25 to 1 per cent and stored for 50 days showed erythrocyte survival of 79 to 89 per cent.

The protective action of various sugars against deterioration of the erythrocytes during storage has been known for some time. Sixteen different sugars were tested for their antihemolytic activity in an attempt to increase the survival time of Na_2EDTA -preserved erythrocytes during storage. The disaccharides (maltose, sucrose) and the trisaccharide (raffinose) retarded hemolysis for over 100 days. Raffinose was the most satisfactory, for it caused only a slight shrinkage of the erythrocytes. Five hundred cubic centimeters of whole blood pre-

served with 1.5 gm. of Na_2EDTA , 10 gm. of raffinose and 2.5 gm. of glucose in 100 cc. of isotonic saline solution and stored for 100 days showed erythrocyte survival of 96 per cent. The preservation of blood with Na_2EDTA and raffinose-glucose may provide satisfactory storage for a period of six to eight weeks.

Na_2EDTA in quantities of 2 mg. to 2.5 mg. prevented 1 cc. of blood from coagulating. The cellular elements were fairly well preserved in spite of its higher alkalinity (pH 8.5).

The fact that the Na_2CaEDTA complex inhibits coagulation is of interest. It takes 30 mg. to prevent 1 cc. of blood from coagulating. Its anticoagulant effect is not due to the binding of the blood calcium, but to its ionic strength. It is easily soluble in water and isotonic saline solutions; it has a pH of about 7.5. It is a good preservative for erythrocytes in concentrations of 2 to 3 per cent.

Since Na_2CaEDTA forms complexes with radioactive substances, blood preserved with it should be useful in combating radium poisoning in the event of atomic warfare.

TOXICITY OF Na_2EDTA AND Na_2CaEDTA

Na_2EDTA given per os is practically atoxic for animals. Rats fed maximum doses had no toxic symptoms except diarrhea. Ninety-six per cent of administered Na_2EDTA was excreted unchanged in the feces of rats fed massive single doses. The coagulation time of the blood was not altered significantly and no pathological changes in the cellular elements were noted.

Rabbits tolerated parenteral injection of as much as 80 mg. of Na_2EDTA per kilogram of body weight without toxic symptoms. When 100 mg. per kilogram was given, tetany developed but the animals recovered rapidly upon administration of calcium ion. Rabbits tolerated intravenous injection of 40 to 80 mg. per kilogram daily for ten days. It was possible to inject 2,000 mg. of Na_2EDTA per kilogram of body weight by slow intravenous infusion over a period of three hours before fatal hypocalcemic levels were reached.

The toxic dose for dogs is 50 mg. per kilogram of body weight. Dogs recovered when injected with 100 mg. of calcium gluconate. Na_2EDTA was well tolerated when injected simultaneously with 100 mg. of calcium gluconate; no changes in blood pressure, respiration or pulse rate were noted.

Na_2EDTA has been given to humans intravenously in doses up to 12 gm. over a period of two days. No toxic symptoms were noted. More than 60 per cent of it was excreted in the urine as calcium complex. The administration of the preformed Na_2CaEDTA is without effect on calcium hemostasis. It is nontoxic by all routes of administration. One patient with

metal poisoning was given a total of 20 gm. of Na_2CaEDTA intravenously at the rate of 5 gm. a day in 500 cc. of saline solution. No toxic reactions were noted. Ninety-nine per cent of the radioactive tagged substance could be recovered from the urine after intravenous administration to rats.⁶

TRANSFUSIONS WITH Na_2EDTA GLUCOSE PRESERVED BLOOD

In 1951 the authors reported upon the first 16 transfusions of Na_2EDTA -preserved blood into humans.¹⁰ Since then 60 more patients have been given similar transfusions. The age of the transfused blood varied from one to forty-two days. The blood was well tolerated, beneficial and without untoward symptoms. Coagulation, bleeding time, prothrombin and calcium content were not significantly changed. Sprague¹⁵ and co-workers were the first to study the survival time of erythrocytes after transfusion of Na_2EDTA -preserved blood. They gave transfusions to eight healthy students, using Na_2EDTA -preserved blood and with ACD-preserved blood, and found the erythrocyte survival time with Na_2EDTA to be as good as with ACD solution. They indicated that (1) there was no significant difference in the initial 72-hour survival of blood collected and stored in ACD or Sequestrene Na_2EDTA dextrose solution and (2) survival was excellent with storage periods of one, ten and twenty-one days; but after twenty-eight days of storage it was definitely decreased. They transfused one lot of blood preserved with Na_2EDTA and stored for 35 days and calculated that 60 per cent of the cells surviving the initial 72-hour post-transfusion period had an apparently normal life span. Survival studies with blood stored for six weeks are contemplated.

PRESERVATION OF BLOOD WITH ETHYL ALCOHOL

Until recently alcohol has not been used for preserving whole blood. Loran⁷ and co-workers reported that they used alcohol in their experiments to preserve ACD-treated blood in liquid state below freezing. They found that the presence of 30 per cent alcohol in ACD-preserved blood permits storage of whole blood at -12°C . in the liquid state. At this temperature 20 per cent alcohol does not hemolyze erythrocytes. The spontaneous hemolysis in blood kept from freezing by alcohol-dextrose after four months of storage at -12°C . was equal to or slightly less than in blood stored at 4°C . Loran and co-workers used rabbits for experiments to test the possibility of transfusing blood preserved with alcohol. One part of ACD-preserved rabbit blood was diluted with one part of ACD solution containing 42 per cent alcohol and stored at -12°C . After four months of storage the supernatant fluid was removed, replaced by saline solution and injected into

the rabbit from which the blood had been withdrawn. The blood was filtered before transfusion and the rabbit survived the injection. Spontaneous hemolysis of the injected blood was 6 per cent. Osmotic resistance against 0.6 per cent sodium chloride showed 78 per cent hemolysis. These investigators suggested the possibility of using alcohol for long range preservation of blood.

During the last two years experiments to preserve blood with alcohol have been carried on by the authors. The effect of alcohol on cells and tissue is due to dehydration and coagulation of the protein substances. Alcohol diluted with distilled water causes complete lysis of erythrocytes. The erythrocyte membrane is freely permeable for alcohol. To maintain the osmotic equilibrium, the alcohol must be diluted with isotonic sodium chloride solution. Saline-diluted alcohol in concentrations of 1 to 15 per cent does not hemolyze human erythrocytes at room temperature for several days, and hemolysis is much retarded at 4° C. In concentrations of 15 to 20 per cent saline diluted alcohol, hemolysis is incomplete; in 20 to 25 per cent, hemolysis is complete; above 35 per cent the erythrocytes are agglutinated.

Hemolysis by alcohol is greatly retarded by a variety of sugars. Whole blood preserved with isotonic alcohol solutions in concentrations of 1 to 20 per cent in the proportion of 1:1 with the addition of 0.15 per cent Na₂EDTA and 6 per cent glucose will retard hemolysis for about 60 days; that containing 5 per cent maltose will retard it for 67 days; that containing 12 per cent sucrose, for 120 days; and that containing raffinose, for about 130 days.*

The toxicity of alcohol is low. Thursz¹⁶ has shown that 150 to 300 cc. of 30 per cent alcohol may be given intravenously, at a rate of 10 to 15 cc. per minute, without hemolysis or toxic symptoms. Further investigations are necessary to determine the minimum amounts of alcohol and sugar suitable for long-time preservation.

PRESERVATION OF ERYTHROCYTES BY FREEZING

Freezing would be the most ideal method for preserving whole blood, if a practical and economical method could be found to recover the erythrocytes after thawing without excessive hemolysis. Luyet's⁸ fundamental observations have shown that viability is greatly facilitated at low temperatures if cells are partially dehydrated by replacing a portion of the intracellular water with one of the lower polyhydric alcohols. Smith¹⁴ presented further evidence by reporting that whole blood in the presence of glycerin could be stored at -79° C. for periods of three months, without excessive hemolysis after thawing.

*Since the reading of this paper, whole blood preserved with alcohol-Na₂EDTA-raffinose has been transfused in humans without untoward symptoms.

Since then Mollison and Sloviter,⁹ Sloviter,¹³ Chaplin and Mollison,² Chaplin and Veal³ and Brown and Hardin¹ have extended Smith's observations. They showed that human erythrocytes equilibrated with glycerin could be cooled to -70° C. for two hours and, although there was considerable loss by hemolysis during the processing, the remaining cells survived normally up to 60 days after transfusion. More recently it has been reported that human erythrocytes that have been stored for more than eight months at -79° C. are capable of normal survival after transfusion.

Chaplin and Mollison demonstrated that packed citrated glycerinated erythrocyte suspensions could be processed at -15° C. and after thawing had very low percentages of hemolysis. They said that 98 per cent of the cells survived after three months and predicted that 90 per cent of the cells may be intact after one year.

If -15° C. is sufficient to keep the metabolic activity of erythrocytes to a minimum it would materially lower the cost of freezing. This moderately low temperature is easily obtained with ordinary refrigeration. The difficulty with the method described is the removal of the glycerin after thawing. The cell suspension must be equilibrated in 16 per cent, 8 per cent and 4 per cent glycerin solutions before final suspension in a 1 per cent saline solution.

No attempts have been made so far to freeze blood preserved with Na₂EDTA. Whole blood preserved with Na₂EDTA can be processed at -20° C. with a low percentage of hemolysis after thawing. One volume of whole blood was mixed with one part of 3 per cent isotonic sodium lactate solution containing 40 per cent glycerin and 8 per cent raffinose. The mixture was equilibrated for one hour at 4° C. and frozen at -20° C. in an ordinary deep-freezer. After 80 days in storage the blood was thawed and the plasma showed only 5 per cent hemolysis. The cell suspension was centrifuged and the erythrocyte sediment equilibrated in isotonic sodium lactate solution containing 5 per cent glycerin and 1 per cent Na₂EDTA. After centrifuging, the supernatant glycerin solution only contained a trace of hemoglobin. The glycerin was finally removed after the cells were suspended twice in 5 per cent glucose-lactate solution. The cell suspension may be preserved without hemolysis for eight to ten days if stored at 4° C.

The above described procedure, freezing blood preserved with Na₂EDTA, is less complicated than using citrated packed erythrocytes. Equilibration with 5 per cent glycerin-Na₂EDTA lactate solution is sufficient to prevent hemolysis before the cells are suspended in glucose-lactate solution. Whether or not the Na₂EDTA-preserved frozen erythrocytes will survive for a year without considerable hemolysis, remains to be seen.

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Prevention of Infectious Hepatitis by Gamma Globulin

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INTEREST IN INFECTIOUS HEPATITIS was aroused during World War II because of its importance in the military effort.³¹ The work of several groups of investigators during this period implicated a filtrable virus as the etiologic agent of this disease.^{4, 13, 20, 30} Evidence indicated that the virus was present in the blood during the early period of disease and that persons who recovered from the illness rarely had a second attack.³¹ Hence, it was postulated that antibodies which could prevent infectious hepatitis might be present in the globulin fraction of the blood.²⁹ It is the purpose of this paper to review certain of the studies which indicate the usefulness of gamma globulin as a passive immunizing agent in this illness.

Although infectious hepatitis has been recognized for more than 100 years, the true incidence of the disease is not yet known. In 1952 (the first year in which it was reported nationally) 17,000 cases were recorded in the United States, and in 1953 the number exceeded 33,000 cases.²³ However, it is probable that this increase represents, in large part, better reporting. In California a similar increase in reported cases has occurred, with 317 cases in 1951, 876 in 1952, and 1,404 in 1953.³ Even with these increases, it is thought that only a small proportion of the total cases occurring is represented. Korns¹⁸ estimated that in New York State not over one-third of the icteric cases are reported to the health department.

It is not within the scope of this review to discuss in detail the clinical and epidemiologic aspects of infectious hepatitis. However, certain facts, because they relate to the feasibility of the use of a passive immunizing agent, seem worth emphasizing.

Jaundice in hepatitis does not occur in all cases, and the nonicteric (and frequently mild) cases may serve as a continuing link in the spread of infection. Children, particularly, often have a mild form of infection, and illness in them may not be diagnosed as infectious hepatitis. The incubation period of infectious hepatitis is longer than in most infectious diseases, the range being 10 to 40 days, with an average length of slightly less than one month.¹⁴ This fact makes hepatitis particularly suitable for

• *Infectious hepatitis, a viral disease, has become increasingly more important in recent years. It is believed that the great increase in reported cases is not due entirely to better reporting, but that there has been an actual increase in the incidence of this disease. The comparatively long incubation period in infectious hepatitis, the high incidence in persons in close contact with patients who have the disease, and the fact that in most instances contact between persons is the mode of spread, makes this disease particularly suitable for the use of an immunizing agent which would be administered after exposure.*

From the studies reviewed it is apparent that gamma globulin is of value in preventing hepatitis both when administered as mass prophylaxis in an epidemic, and when given to persons in close contact with a person who has the disease. Widespread use of gamma globulin prophylactically among persons who have been in close contact with the occasional patients with infectious hepatitis seen by practicing physicians might often obviate the need for mass immunization. It should be stated that there is little evidence for the effectiveness of gamma globulin in the therapy of infectious hepatitis. In a study in which very large amounts (average dose 45 cc.) of gamma globulin were given very early in the disease, no significant difference was observed between those injected and a control group.

the use of an immunizing agent which would be administered after exposure.

Epidemics of infectious hepatitis have resulted from fecal contamination of water,^{8, 24} possibly from contamination of milk²¹ and food,²⁶ and from direct contact between persons.^{5, 17, 19} In epidemics arising from a common source, passive immunization would be of little value in most instances, as most of the cases would have occurred before the group at risk was known. However, as will be shown later, prophylactic measures for persons in close contact with those who are infected would be desirable. In epidemics propagated by person-to-person contact, the fecal-oral route of transmission has been conclusively demonstrated in one instance,⁵ and it is

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TABLE 1.—Studies on mass prophylaxis of infectious hepatitis with gamma globulin

Investigators	Number of individuals		Hepatitis with jaundice			
	Control	Inoculated	Control		Inoculated	
	No.		No.	Per cent	No.	Per cent
Stokes and Neefe (29) (Summer Camps).....	278	53	125	44.9	3	5.7
Gellis, et al. (9) (Army).....	11,326	2,732	360	3.2	10	0.4
Havens and Paul (15) (Orphanage).....	155	97	36	23.0	2	2.0
Stokes, et al. (27) (Mental institutions).....	347	354	89	25.6	8	2.3

TABLE 2.—Studies on the control of secondary cases of infectious hepatitis in families by gamma globulin

Investigators	Number of persons exposed		Cases of hepatitis			
	Control	Inoculated	Control		Inoculated	
	No.		No.	Per cent	No.	Per cent
Brooks, et al. (2).....	114	55	18	16.0	1	2.0
Hsia, et al. (16).....	95	95	13	14.0	1	1.0
Lilienfeld, et al. (19).....	228	71	20	8.8	1	1.4
Ashley (1).....	690	269	116	16.8	3	1.1
Korns (18).....	839	588	124	14.8	10	1.7

probable that this is the mode of transmission in most contact epidemics and in endemic cases of infectious hepatitis. Recent study of two epidemics, one in a rural area¹⁷ and one in an urban housing development,¹⁹ showed that the risk of acquiring infection is much greater in persons in contact with a case within the home than in the population at large.

GAMMA GLOBULIN IN INFECTIOUS HEPATITIS

Following the demonstration by Enders⁷ that certain fractions (gamma globulins) of pooled human plasma contained a greatly increased concentration of antibodies against a variety of bacterial and viral agents, Stokes, Maris, and Gellis²⁸ proved the value of gamma globulin in the prevention and attenuation of measles. In 1945, Stokes and Neefe²⁹ first used gamma globulin in an epidemic of infectious hepatitis in a summer camp. Fifty-three persons were inoculated with gamma globulin and 278 were not inoculated. Three cases of hepatitis occurred in the inoculated group (5.7 per cent), and 125 cases (45 per cent) occurred in the uninoculated group. Following this demonstration, several other investigators initiated controlled studies in order to determine the value of gamma globulin in epidemic areas. These are listed in Table 1. Although the environmental factors were not the same in any two of these epidemics, it is evident that in each instance a significantly lower attack rate was observed in the group receiving gamma globulin. It is of interest that most of the cases occurring in the inoculated groups had onset within one week of the time gamma globulin was given, while only a small proportion of the total cases occurring in the control groups appeared during the same time period.

In the experiments cited in the previous paragraph, gamma globulin was administered as mass prophylaxis in one part of a homogeneous population, with the remainder of the population serving

as controls. Practicing physicians ordinarily are not faced with the control of an epidemic but rather with the problem of what can be done to prevent illness in persons in close contact with patients under their care. In an epidemic in an urban housing project, Lilienfeld, Bross and Sartwell¹⁹ found that 20 cases of hepatitis with jaundice occurred among 228 household contacts who had not received gamma globulin, while only one case occurred in 71 contacts who had received gamma globulin. It is of interest that this person became ill two days after being inoculated. In two other studies^{1, 18} a similarly pronounced reduction in the secondary attack rate occurred in families whose members had received gamma globulin. Although this information was obtained in retrospect and may be open to some criticism, two recent controlled studies corroborate it. Brooks, Hsia, and Gellis² studied the members of 46 families in each of which one person had infectious hepatitis. Gamma globulin was administered to all of the immediate members of 17 families, and to none of the persons in the remaining 29 families, who served as controls. At least one secondary case occurred in each of 14 of the control families, while only one secondary case of infectious hepatitis developed in the 17 families whose members received gamma globulin. This person became ill two days after receiving the material. In an extension of this work, Hsia, Lonsway and Gellis¹⁶ administered gamma globulin to alternately selected members of the families of 40 cases of infectious hepatitis. The remaining uninoculated members served as controls. Infectious hepatitis developed in 13 of the 95 persons in the control group, while the disease occurred in only one of the 95 persons who received gamma globulin; that person became ill six days after the inoculation. Table 2 lists the results described above. From this discussion it would appear that persons who are in close contact with a person in the home who has hepatitis should receive gamma globulin.

DOSAGE

In the early experiments²⁹ gamma globulin was administered intramuscularly in a dosage of 0.15 cc. per pound of body weight. Recently, however,^{16, 27} as little as 0.01 cc. per pound given intramuscularly has been found to be effective. Hsia, Lonsway and Gellis¹⁶ said that the use of 0.005 cc. per pound was not effective in preventing infectious hepatitis. It is recommended that gamma globulin, in a dosage of 0.01 cc. per pound of body weight, be given intramuscularly, all at one time.

TOXICITY

Reactions to gamma globulin administered intramuscularly are exceedingly rare. In a study of the effect of gamma globulin on poliomyelitis,¹² more than 24,000 children were inoculated and reaction was observed in only 14 persons, urticaria being the most common. One instance of what appeared to be an immediate anaphylactic reaction has been reported.²⁵ In that case the patient, a child, had received gamma globulin previously. Recovery followed immediate treatment with epinephrine and Benadryl.

Although the virus of serum hepatitis may be present in the plasma pools from which gamma globulin is prepared, there is evidence that this does not constitute a hazard. The injection into 10 volunteers of gamma globulin prepared from plasma known to contain serum hepatitis virus did not produce serum hepatitis.²²

SERUM HEPATITIS

The efficacy of gamma globulin in preventing serum hepatitis has not been established. While earlier studies¹¹ suggested some benefit, recent work⁶ in volunteers, who received gamma globulin prepared from the blood of individuals convalescent from serum hepatitis, did not show gamma globulin to be efficacious in the prevention of this disease. In that study, gamma globulin in 2 cc. amounts was injected at the same time as the virus and again 40 days later. Hepatitis with jaundice occurred in two of four volunteers. In the earlier experiment in which gamma globulin appeared to be effective, 10 cc. amounts were administered and repeated one month later. Perhaps the differences in results observed in the two experiments were owing to the different dosages employed.

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Infectious Hepatitis

Report of an Outbreak of 24 Cases

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THE PRESENT COMMUNICATION, an epidemiologic case report, describes a common pattern of occurrence of infectious hepatitis and cites an instance in which the prophylactic use of gamma globulin would have been desirable.

Because of a report of several cases of infectious hepatitis in Village "A," an investigation was undertaken by state and local health departments June 1 and 2, 1954. Village "A" is a community of approximately 500 persons situated in a rural area of Northern California. A lumber mill is located in the town and lumbering is the main industry. There are no physicians in Village "A" and medical care is obtained in Village "B," approximately 20 miles away.

Occurrence of Cases

Criteria for the diagnosis of infectious hepatitis were a characteristic history of illness accompanied by jaundice.

The first case of infectious hepatitis consistent with these criteria occurred in a 6-year-old girl (first grade pupil) in whom onset was on February 5, 1954. The patient's family had moved to Village "A" only 11 days before. There was no history of contact with a case of hepatitis in the patient's previous home in another state. The second case occurred on March 13 in a 6-year-old classmate of the girl in whom the disease was noted first. Four weeks later a third case occurred in a child in the same classroom and from that time up to the time this report was written (July 1954) at least one case occurred each week and there were 24 cases in all, 13 in males and 11 in females. The peak week of the epidemic was the week ended May 15 (Chart 1). During that week six

• In an epidemic of 24 cases of infectious hepatitis in a small lumbering community, the majority of cases occurred in children. Sixteen of them were pupils in one school. The school apparently was the focus for the spread of infection, which is thought to have been through contact between persons. Five multiple case households with eight secondary cases were observed. With one exception, gamma globulin was not used for the prophylaxis of infectious hepatitis in families in which one member had the disease.

INFECTIOUS HEPATITIS IN VILLAGE A
1954

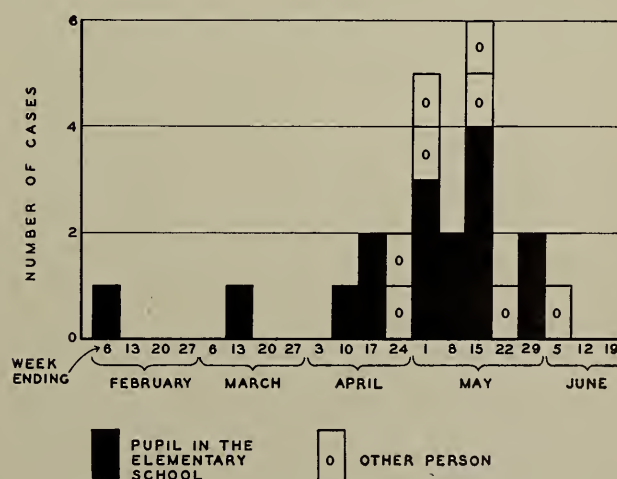


Chart 1

cases of infectious hepatitis occurred. There were no deaths.

The occurrence of cases in various age groups was:

Age Group	No. of Cases
0-4	2
5-9	9
10-14	7
15-19	1
20-24	1
25-29	2
30 and over... ..	2
Total.....	24

Sixteen of the 24 persons ill were students in the Village "A" elementary school, which includes kindergarten through the eighth grade in a four-room, fairly new building. The various grades and rooms with the number of cases in each grade and room and the attack rate by room were as follows:

Room	Grades	No. Pupils	No. Cases	Rate Per Cent
1	Kindergarten	17	1	20.0
	First	23	7	
2	Second	14	1	8.6
	Third	6	0	
	Fourth	15	2	
3	Fifth	18	0	6.5
	Sixth	13	2	
4	Seventh	11	2	12.0
	Eighth	14	1	
Total		131	16	12.2

It is evident that the highest incidence occurred in the first grade, which is the class in which the patient with the first case was enrolled.

Multiple Case Households

In five households more than one case occurred—13 in all. The interval between the onset of the initial and subsequent cases in each household was more than two weeks in all instances. It is felt that the eight subsequent cases can be considered as

instances of secondary infection within the household.

Means of Spread

The first-grade pupil who had the first case almost certainly acquired the infection in the previous place of residence from which she had but recently come. Both the second and the third cases, each occurring approximately one incubation period from the preceding case, occurred in classmates of the first patient. The spread of infection thenceforward was less clear. The water supply in the village is obtained from private wells and it would appear unlikely that water could be the source of infection except in the school. It is possible that intermittent contamination of the school water supply could have occurred and this could be the source of infection in the school children. However, it is felt that the spread of infection in this outbreak can best be explained as having been due to contact between persons and not as being due to a common source. Every case can be related either directly or indirectly to the school and it is thought that this was the focus of infection.

Prophylaxis in Family Contacts

Gamma globulin was administered to the other members of the family of a patient in only one instance in the outbreak and it was necessary for that family to travel some distance to receive the immunization. Although gamma globulin was available in Village "B," the physicians there did not use it. Available evidence¹ suggests that the use of gamma globulin in household contacts of cases might have prevented the appearance of at least some of the eight secondary cases that occurred in familial groups.

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Diagnosis and Treatment of Glaucoma

A Review of Recent Developments

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PROBABLY the most important development of help in the diagnosis of glaucoma in the past several years is Grant's tonography.⁴ It has contributed a great deal to the understanding of the mechanism of the various types of glaucoma and will undoubtedly contribute still more.

Tonography is a method of measuring the resistance of the eye to the outflow of intraocular fluid. It also measures indirectly the rate of production of aqueous. The test is simple to do and consists in measuring the drop in ocular tension that occurs when an electronic tonometer is allowed to rest on the eye for four or five minutes. From the measurement obtained the loss in volume of the eye is calculated and the result is expressed as the facility of aqueous outflow in cubic millimeters of aqueous per minute per millimeter (mercury) of increase in intraocular pressure that is produced by the tonometer. An electric tonometer is required because the difficulty of holding an ordinary tonometer steady for the time of the test and because the meter is more easily read than the dial of the regular tonometer. Also the electronic tonometer may be connected to a recording galvanometer so that continuous recordings may be made of the tension. If a galvanometer is not used, readings are taken every 30 seconds and the average reduction in tension calculated.

The average facility of aqueous outflow for normal eyes is about 0.22* with a range of 0.10 to 0.5. For eyes with chronic open angle glaucoma the average is about 0.10 with a spread of 0.01 to 0.15. Thus there is an overlapping zone of 0.10 to 0.15 that includes the lower range of normal and also early chronic glaucoma. Even so, however, the results of tonography may be of great assistance in confirming the diagnosis in doubtful cases. It is also valuable for following the progress of glaucoma during treatment with miotics and after operation. It is perhaps a better indication of the status of the disease in an eye than is the tension.

Of other provocative tests for the diagnosis of chronic open angle glaucoma the one which has

• *Tonography is helpful in the diagnosis of doubtful cases of chronic simple glaucoma. It also gives a good indication of the status of the disease in a given eye.*

The most useful miotic in the treatment of glaucoma is still pilocarpine. Carbachol is more potent but must be used in an anhydrous base ointment or in a solution of a wetting agent. DFP (diisopropyl fluorophosphate) produces undesirable side effects because of the hyper-reactivity of the ciliary body and iris sphincter which it causes. These can be partly overcome by using pilocarpine first. Diamox is a carbonic anhydrase inhibitor that is effective when given orally. In many cases it produces at least a temporary lowering of tension in glaucomatous eyes, apparently by reducing the secretion of intraocular fluid. Its ultimate value in glaucoma remains to be seen.

The cyclodiathermy operation which has been modified somewhat by Weekers has had a recent increase in use but the long-term results have been somewhat disappointing.

The importance of early operation in narrow angle glaucoma is becoming more and more apparent. Following iridectomy the wound should be tightly sutured to insure the prompt reformation of the anterior chamber.

stood the test of time best is the water drinking test.[†] Recent articles have confirmed this and have shown that other tests such as the lability test and the caffeine test are uncertain.

There are a number of subjects that should be included in a discussion of the treatment of glaucoma. Swan⁷ recently reviewed the rationale for the proper use of the miotics. Pilocarpine is still the most useful drug for the treatment of glaucoma of chronic type because it is stable in aqueous solutions, it penetrates the cornea consistently and it seldom causes allergic reactions. It acts by directly stimulating the smooth muscle cells of the iris

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*Cubic mm. of aqueous per minute per mm. of mercury increased intraocular pressure.

†The patient drinks 1000 cc. of water within 5 minutes after having had tension measured. The tension is then measured three or four times at 20-minute intervals. A rise of 6 mm. of mercury or more is considered "positive." The patient should have no food or liquids for 5 hours before the test.

sphincter and ciliary body. Thus the reactivity of the muscles to nervous stimuli is reduced and the annoying symptoms of ciliary spasm are much milder than after the use of cholinesterase-inhibiting miotics such as eserine or diisopropyl fluorophosphate (DFP). As it is possible to get the full effect from pilocarpine in a 3 or 4 per cent solution, stronger solutions are unnecessary.

Carbachol is much more potent than pilocarpine but is so hydrophilic that it will not penetrate the corneal epithelium from an aqueous solution. It must be given in an anhydrous base ointment or in a solution of a wetting agent such as Zephiran. Gentle massage of the cornea, through the lids, enhances absorption. However, if the epithelium be damaged either by tonometry or topical anesthesia alone, enough carbachol may be absorbed to cause severe generalized reactions including abrupt fall in blood pressure.

Eserine and DFP act by inhibiting cholinesterase so that the acetylcholine produced by nervous stimulation can have a prolonged action on the muscle cells. The resulting hyperreactivity of the muscles causes painful spasms of the iris and ciliary body. These symptoms may be reduced by administering pilocarpine before using DFP. The reactivity of the muscles is reduced by the pilocarpine so that DFP is tolerated better. The pilocarpine can then be gradually reduced.

DFP is very unstable in the presence of water and this has made its use in weaker concentrations such as 0.01 per cent somewhat uncertain. If the bottle is left open in a moist atmosphere or if the dropper is permitted to touch the lids during instillation, the resulting contamination causes a rapid loss of potency of the drug.

DFP is definitely contraindicated in narrow angle glaucoma. Numerous cases of acute attacks of glaucoma induced by DFP have been reported. Its best place is in the treatment of aphakic glaucoma where ciliary spasm is not annoying and the angle is wide.

CARBONIC ANHYDRASE INHIBITORS

Perhaps the most promising development of the last few years in the treatment of glaucoma is the use of carbonic anhydrase inhibitors. The first of these is acetazoleamide (Diamox) on which Becker² recently reported. Carbonic anhydrase was discovered in the blood in 1932. It is an enzyme that catalyzes the reversible reaction of water plus carbon dioxide to give carbonic acid. In 1940 the sulfonamides were found to be inhibitors of carbonic anhydrase. In 1950 Diamox, which is one of the sulfonamides, was brought out. It has been used since that time by internists as a diuretic. It produces diuresis by interfering with the reabsorption of bicarbonate by the renal tubules and the bicar-

bonate that passes out of the kidney carries with it a certain amount of water. Besides the diuretic effect, the loss of bicarbonate tends to bring about acidosis.

Since Kinsey⁶ found a great excess of bicarbonate in the posterior chamber of the rabbit eye, it was felt that carbonic anhydrase might play a role in the secretion of the aqueous. Therefore a substance that inhibits the action of carbonic anhydrase might be expected to cut down the production of aqueous and lower the intraocular pressure.

Diamox is given by mouth and relatively little toxic effect has been noted even when it was given for long periods of time in congestive heart failure. It has been found to lower the tension in a high percentage of normal as well as glaucomatous eyes. It had some effect in all but two or three per cent of a total of about 250 cases reported upon at the Wilmer Resident's Meeting at Johns Hopkins. Whereas it is best given in single doses every day or two when it is used as a diuretic, it has been found to be more effective on the eye when it is administered in divided doses several times a day. The maximum recommended dose for this purpose is 250 mg. every four hours. Diabetes and kidney disease are contraindications. In some patients it takes as long as three days for the tension-lowering effect of Diamox to take place. Ammonium chloride has been given to patients who have not responded to Diamox alone and this has increased the action of Diamox, apparently by lowering the pH of the blood and producing mild acidosis. Leopold observed that giving sodium chloride at the rate of 2 gm. per day reduced the action of Diamox. The reason for this has not been explained. Lederle Laboratories recently brought out sodium Diamox, which can be given intravenously. The drug is more effective intravenously than when it is given orally, and injection may be found useful in treating patients with acute glaucoma who, because of nausea and vomiting, are unable to retain oral doses of the drug.

The action of Diamox is apparently not the result of diuresis that it brings about, for the ocular tension abates before diuresis occurs. Tonographic measurements made during the administration of Diamox have shown no change in the facility of aqueous outflow. Diamox has also been found effective in lowering the pressure when the angle of the anterior chamber was completely closed with peripheral anterior synechias. This would suggest that the decreased tension is the result of inhibition of the rate of inflow of the aqueous. This was measured recently, using Goldmann's method, and it was found that the aqueous inflow was reduced by as much as two-thirds. Friedenwald gave ascorbic acid, an activator of carbonic anhydrase, to rabbits before administering Diamox. The effect of Diamox on the intraocular pressure was appreciably diminished by the ascorbic acid, which is evidence that the tension-

lowering effect of Diamox is apparently the result directly of its inhibition of carbonic anhydrase.

Many other carbonic anhydrase inhibitors are available, some more potent than Diamox. A search is under way for one that may be effective topically. As yet none has been found.

Complications that have occurred during the administration of Diamox include numbness and tingling of the extremities, headache, dizziness, nausea and insomnia. Some of these may have been coincidental, but all disappeared promptly when the drug was discontinued or the dosage reduced. Although Diamox is a sulfonamide, no cases of agranulocytosis or aplastic anemia have been observed. The possible effect of this drug on the bone marrow must be kept in mind, however. Ocular complications have included one case of optic neuritis and one case of retinal hemorrhages following five months of administration. Since the retina normally contains carbonic anhydrase, this may turn out to be a complication to watch for.

In considering other possibilities of complications, it might be conjectured that prolonged reduction of the inflow of aqueous would interfere with the nutrition of the lens and perhaps hasten the formation of cataracts. Also the stagnation of the through-and-through flow of aqueous might conceivably increase the blockage of the trabeculum or the aqueous veins or whatever it is that causes the increased resistance to outflow that is presumably the cause of primary open angle glaucoma.

The present status of Diamox would seem to be that of a useful adjunct in acute cases before operation. It also seems to be helpful in getting patients past relatively short-lived attacks secondary to trauma or inflammation. Whether it will be feasible in the long-term treatment of chronic simple glaucoma remains to be seen.

ADVANCES IN SURGICAL TREATMENT

As to the surgical treatment of glaucoma, the operation that has received the most attention recently is cyclodiathermy. A modification of technique by Weekers⁸ brought about a revival of interest in the procedure. The old method consisted of making perhaps 50 or 60 applications of diathermy three or four millimeters back of the limbus. Each application lasted one to two seconds. The results were not as encouraging as was hoped and many ophthalmologists abandoned the operation. In Weekers' technique, the applications are fewer, longer (10 to 15 seconds) and placed farther back (six or seven millimeters). Many promising reports have been published, and some investigators have gone so far as to recommend the operation for glaucoma of all types and stages, almost to the exclusion of other surgical methods. Others have not had such good results. At

the Stanford glaucoma clinic, use of the operation in early chronic primary or secondary glaucoma has not been very successful. The author certainly would not think of using this operation for early iris block glaucoma where iridectomy has not been done and believes that it should be restricted to cases of advanced glaucoma in which other therapeutic measures have failed, and perhaps to glaucoma following occlusion of the central retinal vein or diabetic rubeosis where other operations are contraindicated.

There is apparently a narrow margin of safety between the amount of diathermy required to produce permanent normalizing of the tension and that which will cause hypotony or even phthisis. In most of the cases observed by the author the tension has returned to its original level within two or three months despite repeated operations.

The surgical treatment of narrow angle or iris block glaucoma has been the subject of considerable discussion. Not long ago Barkan¹ again emphasized the importance of early operation with peripheral iridectomy done with a tightly closed incision. This procedure, he said, insures prompt reformation of the anterior chamber and prevents development of peripheral anterior synechias. In this he agrees with Haas⁵ and Chandler.³ For cases in which peripheral anterior synechia already is present, Barkan advised cyclodialysis combined with iridectomy, whereas the procedure preferred by most workers in cases of this kind is iridencleisis. The latter operation has certain definite disadvantages in iris block glaucoma. The tendency for delayed reformation of the anterior chamber may cause more adhesions to develop in the angle. Also a malignant course may be more likely to follow. The optical results of iridencleisis are seldom perfect. It would seem that every effort should be made to cure iris block glaucoma with peripheral iridectomy alone. There is no question about the early cases or cases in which operation is done in the interval between attacks. In somewhat more advanced cases where the tension has been elevated for three or four days or perhaps as long as a week, iridectomy may be done and the wound sutured. Air may then be injected into the anterior chamber under considerable pressure, which results in backward displacement of the iris and lens. This maneuver may succeed in breaking peripheral anterior synechias if they are not too well established. Most of the air must then be permitted to escape. The one patient on whom the author used this procedure was cured of an attack of acute iris block glaucoma lasting three days with a tension in the eighties. It was the third such attack, the tension having been normal between attacks. The patient needed no miotics in a six-month period of occasional observation after operation.

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C.M.A. Placement Service

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CASE REPORTS

- Development of Porphyria During Chloroquine Therapy for Chronic Discoid Lupus Erythematosus
- Spontaneous Hematoma in the Rectus Abdominis Muscle

Development of Porphyria During Chloroquine Therapy for Chronic Discoid Lupus Erythematosus

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PORPHYRIA and the metabolism of porphyrins have been objects of interest for many years despite the rarity of the disease. This interest has resulted in investigative endeavor which has constantly added to the knowledge of the subject and dispelled much of the confusion in the concepts and terminology of earlier investigators. There is not, however, unanimity of opinion as to a system of classification and the etiologic delineation of the disease remains obscure. Most authorities^{1, 8, 15} do agree that in order for porphyria to develop a patient must have an overt or latent inborn error of metabolism.

There are three main types of porphyrins that are significant in the understanding of porphyria: uroporphyrin, coproporphyrin and protoporphyrin. A related compound, porphobilinogen, is also excreted in some cases. These porphyrins have in common a basic cyclic structure, the porphyrin nucleus, and differ only in the attached side chains.¹¹ The porphyrin nucleus is also a fundamental component of many other important chemical structures including hemoglobin, the cellular respiratory enzymes and the chlorophyll molecule.⁸ The physiologic role of uroporphyrin and coproporphyrin is not definitely known, but there is evidence that they are the precursors of protoporphyrin which is combined with iron and protein to form hemoglobin.¹⁴

Porphyria has been classified by Waldenstrom¹³ into three main varieties: congenital, acute intermittent and cutanea tarda. The congenital type is rare and has its onset in early childhood. The cutaneous lesions occur on exposed surfaces and are characterized by bullae and eventual scarring. The skin lesions are thought to be due to the photosensitivity

possessed by these patients. Other findings include red teeth, red bones and hypertrichosis. The rather constant presence of anemia and splenomegaly and the large amounts of uroporphyrin in the immature erythrocytes led Lowry and co-workers⁷ to classify this variety as porphyria erythropoietica.

Acute intermittent porphyria begins later in life, usually in the second to fourth decades. Onset is sudden and the symptoms consist of abdominal colic, obstipation, transient increase in blood pressure and neurologic and psychic disturbances. Spontaneous remissions in acute porphyria are the rule, but recurrences are common and the disease is frequently fatal.

The usual onset of porphyria cutanea tarda, or chronic porphyria, is characterized by a bullous eruption on the exposed skin of adults. This is thought to occur in response to light, heat or minor trauma.³ Photosensitivity is not as prominent in the cutanea tarda variety as it is in congenital porphyria and trauma is usually a necessary precipitating factor.¹⁷ The patients usually have a dusky complexion, hypertrichosis and hyperpigmentation. There is frequently evidence of hepatic dysfunction. The cutanea tarda form of porphyria is distinguishable from the acute form by the presence of skin lesions and the absence of abdominal or neurologic manifestations.

There is an increased excretion of a uro-type porphyrin in all the varieties of porphyria. The excretion of large amounts of uroporphyrin is considered to be so important that the diagnosis of porphyria cannot be established without this finding. Porphyrinuria, on the other hand, alludes to the excretion of increased quantities of porphyrins of any type, usually coproporphyrin. The excretion of coproporphyrin occurs in many unrelated diseases and its significance is unknown. These two terms, porphyria and porphyrinuria, must be clearly differentiated.

The excretion of porphyrins has been studied in many skin diseases. Lupus erythematosus has been one of the most frequently investigated. Brunsting in 1939² reported seven cases of lupus erythematosus of all varieties. Increased coproporphyrin excretion occurred in only one of the cases, that of a patient with discoid lupus erythematosus. There were no

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instances of uroporphyrinuria. Zeligman¹⁶ in 1946 reported elevated urinary coproporphyrin excretion in eight of 34 patients with the discoid variety and in all of four patients with acute disseminated lupus erythematosus. Porphyrinuria in these latter four cases was attributed to low-grade hyperpyrexia. Zeligman found no excretion of uroporphyrin in any of the above patients or in 88 other patients with miscellaneous diseases of the skin.

So far as could be determined there is no report of the occurrence of porphyria in a case of lupus erythematosus with the classic urinary findings including the presence of large quantities of uroporphyrin. Schoch,¹⁰ in a recent review article on the cutaneous manifestations of porphyria, said that lupus erythematosus has been reported in association with porphyria. However, the authorities^{4, 6} cited by Schoch said only that porphyrins were excreted in lupus erythematosus. They did not mention the type of porphyrins and therefore no conclusions can be drawn as to the possible presence of porphyria.

The purpose of the present communication is to present a case report of a patient with chronic discoid lupus erythematosus of six years' duration who had an episode typical of acute intermittent porphyria while receiving chloroquine therapy.

REPORT OF A CASE

A 48-year-old Negro man was admitted to the hospital July 16, 1953, with complaint of chills, fever, vomiting, abdominal pain and "blood in the urine" of one day's duration. Upon physical examination the patient appeared to be acutely ill. The temperature was 100.2° F. The blood pressure was 130/80 mm. of mercury. Scattered over the face, chest, arms and scalp were discrete, atrophic, pigmented and depigmented plaques varying in size from 8 to 25 mm. in diameter. Some of them were erythematous and scaling; others appeared to be old scars. Pronounced tenderness in the right upper quadrant of the abdomen, without muscular rigidity, was noted. No organs or masses were palpable and the bowel sounds were normal.

The hemoglobin content was 13.8 gm. per 100 cc. of blood. Leukocytes numbered 20,100 per cu. mm.—91 per cent polymorphonuclear cells. The urine was burgundy red in color and contained a moderate amount of albumin. It fluoresced brightly under a Wood's light. Spectroscopic examination of the urine, acidified with an equal part of 25 per cent hydrochloric acid, revealed an absorption maximum at 552 millimicrons. This indicated the presence of a uroporphyrin.¹¹

Past history. The patient was hospitalized for "pellagra" at the age of 14. He did not recall clearly any of the symptoms of that time.

He had a positive reaction to a serological test for syphilis in 1943 upon entry into the Army and he was treated with weekly injections of arsenic and bismuth for three months. The results of serologic tests after that varied from negative to slightly positive. Cerebrospinal fluid examinations were performed

TABLE 1.—Urinary porphyrin excretion of patient and relatives

Date	Coproporphyrins (micrograms)		Uroporphyrins (micrograms)	
	Per 100 cc.	Per 24 hrs.	Per 100 cc.	Per 24 hrs.
Normal:		10-120		5-20
July 16, 1953.....	1.43		13.8	
July 18, 1953.....	1.12		16.0	
July 20, 1953.....	0.82		10.5	
July 24, 1953.....	2.30	37.8	6.0	91.0
July 25, 1953.....	0.42	8.8	8.9	187.0
July 30, 1953.....	0.68	12.8	3.0	57.0
Aug. 5, 1953.....	1.23		6.3	
Aug. 11, 1953.....	0.56	12.9	1.6	37.5
Nov. 24, 1953.....		0		0
Son	0.32		0	
Sister	0.06		0	
Brother	0.45		0	

in 1944 and again in 1950. They were normal on both occasions. The result of a treponemal immobilization test (TPI) performed in February 1954 was positive. The patient received 4.2 million units of penicillin in 1949 for an intercurrent infection.

The patient was first observed in the Dermatology Clinic of the Veterans Administration Hospital in May 1947, at which time he complained of several areas of alopecia on the scalp and one in the left eyebrow of three months' duration. The clinical impression was chronic discoid lupus erythematosus and this was confirmed by several biopsies. During the following six years the patient received most forms of therapy advocated for chronic discoid lupus erythematosus, including bismuth, gold, cortisone, testosterone, alpha tocopherol, liver extract and local therapy with carbon dioxide, phenol and hydrocortisone ointment. Despite these measures there was slow progression of the dermatosis, with new lesions appearing on the trunk, arms, hands, face and scalp. Bullae were not observed at any time.

The patient had many subjective complaints from time to time, most of them referable to arthralgia and tenderness in the skin lesions. No evidence suggestive of disseminated lupus erythematosus ever was noted in pertinent laboratory studies. Approximately one month before admission, roentgenograms revealed a possible duodenal ulcer, for which the patient was given Donnatal. Five days before admission, chloroquine, 0.5 gm. daily, was given for the discoid lupus erythematosus.

Course in the hospital. All previous medications were discontinued upon admittance to hospital. The acute symptoms disappeared two days after admission and did not recur. The leukocyte content decreased to 9,000 per cu. mm. of blood the day following admission and results of all further laboratory examinations were within normal limits except for the presence of porphyrins in the urine. Data on urinary excretion of porphyrins by the patient (and, for controls, by members of his family) are summarized in Table 1. The patient was discharged from the hospital January 13, 1954, and thereafter worked regularly as a truck driver.

DISCUSSION

The diagnosis and classification of the disease in the case herein reported was puzzling until all the clinical features were evaluated. An adult with chronic scarring dermatosis who begins to excrete uroporphyrin would normally be considered to have porphyria of the cutanea tarda type, and this diagnosis was seriously entertained. However, it is believed that in the present case there were two diseases—chronic discoid lupus erythematosus and acute porphyria. The cutaneous lesions were typical clinically and histologically of chronic discoid lupus erythematosus. They occurred on other than exposed areas and were not produced by trauma or light, unlike the findings in porphyria cutanea tarda. There were no bullae noted during the six years this patient had been under observation. Similarly, there was no abnormal melanosis or hypertrichosis as is seen in patients with porphyria cutanea tarda.

The clinical features and laboratory data were also not those of porphyria cutanea tarda. There was sudden onset of systemic manifestations and early spontaneous remission. Uroporphyrin excretion occurred only during the acute episode and then was absent for a period of more than eight months during which the patient was under observation. Chronic hepatic damage, a regular finding in porphyria cutanea tarda, was not demonstrable.

Analysis for the various porphyrins did not help to differentiate the specific type of porphyria. Porphyria cutanea tarda and acute intermittent porphyria are generally characterized by the excretion of uroporphyrin and a zinc porphyrin complex.¹¹ Classically, porphobilinogen is also regularly found in acute intermittent porphyria, but it has been reported in porphyria cutanea tarda.³ In the present case uroporphyrin and the zinc porphyrin complex were excreted, but not porphobilinogen. Brunsting³ stated that it is not possible to separate the clinical classes of porphyria on the basis of the laboratory studies of the urine and feces alone.

The occurrence of porphyria during the administration of a drug has been reported previously.^{9, 15} In such instances it was concluded that the drug precipitated clinical manifestations of a latent inborn error in metabolism. There is increasing experimental evidence, however, that porphyria can be produced by a drug, *per se*. The excretion of uroporphyrin and syndromes closely resembling the two major types of porphyria have been produced in animals by the administration of Sedormid, phenylhydrazine and lead and ultraviolet light.^{9, 12} Granting that in the majority of cases involving drugs, reported to date, the condition was owing to inborn errors of metabolism, it must be considered in the light of this recent evidence that porphyria can be produced in persons who have no such constitutional predisposition. The recognition of persons of this kind is therefore of more than academic interest because such reactions may be amenable to therapy, as are other drug reactions, and are of more favorable prognosis. In the patient reported upon herein there was no history or clinical evidence of any preexisting porphyria.

It must, therefore, be considered that a drug was the etiologic agent in this patient.

The drugs he was taking at the onset of the attack of porphyria were Donnatal and chloroquine. The former is a combination of phenobarbital and the alkaloids of belladonna. Although porphyria following the ingestion of barbiturates has been reported,³ it is not felt that the phenobarbital precipitated the attack in this patient because he had had phenobarbital on several occasions during the preceding years, had been taking the drug for one month before the onset of the attack, and took the drug after the attack with no untoward reaction. The most likely causative agent, therefore, would be the chloroquine that the patient received for just five days before the onset of the attack. Chloroquine is generally innocuous. The usual toxic symptoms are pruritus and mild gastrointestinal disturbances,⁵ and there have been no previously reported instances of porphyria following administration of the drug. However, the timeliness of onset of porphyria makes it possible that chloroquine was of etiologic significance. Chloroquine was not readministered because of the possibility of severe consequences.

There appears to be no significant relationship between porphyria and lupus erythematosus. As was mentioned previously, there have been no recorded cases in which the two diseases occurred in one patient. The fact that the two diseases occurred simultaneously in this patient is merely coincidental and no common etiologic mechanism is evident.

SUMMARY

A case of acute porphyria in a patient with chronic discoid lupus erythematosus is reported. This is believed to be the first instance in which the two diseases occurred in the same patient. The possibility of drugs as causative agents in porphyria is pointed out and the role of a drug, chloroquine, in this case is discussed.

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Spontaneous Hematoma in the Rectus Abdominis Muscle

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HEMATOMA of the rectus abdominis muscle is a definite clinical entity with more or less constant basic symptoms and physical features. It was accurately described by the ancient Greek physicians and since then has been mentioned periodically. The so-called "spontaneous" hematoma is not a rare occurrence but is sufficiently uncommon that most practitioners will not see a case during an entire career.

The condition is of interest, clinically, because it may closely simulate acute intra-abdominal disease. It is due to a rupture of the fibers of the rectus abdominis muscle or a tear in one of the epigastric vessels with hemorrhage into the sheath of the rectus muscle. It is usually unilateral and below the level of the umbilicus. Since the epigastric vessels are on the dorsal surface of the rectus muscle, bleeding occurs between the muscle and the posterior sheath above the fold of Douglas and between the muscle and the peritoneum below the fold. Brodel,² discussing the anatomic reason for this, noted that the lower one-third of the muscle is the most powerful portion and that greater changes in length occur there. Also, extramuscular branches of vessels are longer in the lower one-third to compensate for the excessive change in length.

Although the cause is often unknown, the condition tends to occur in the following three groups:

1. Persons with normal muscles. Here hemorrhage is due to muscular effort such as sudden violent movement, cough or sneeze.
2. Persons with disease or inanition of the mus-

cles—particularly those with pendulous abdomens as in pregnant multiparous women.

3. Persons with advanced diseases of the blood vessels.

Wohlgemuth⁷ collected reports of 127 cases prior to 1923. Of these, 107 were of traumatic origin; they occurred mostly in young males who were soldiers or athletes.

Teske⁶ reviewed reports of 100 cases in the literature and himself reported a case. He noted the incidence was three times as great in men as in women. The etiologic factors in the cases he reviewed were as follows: Idiopathic, 53; associated with pregnancy, 22; traumatic, 19; associated with disease, 6. Ages of patients ranged from 17 to 83 years with the average 46.8 years. Pain was a symptom in 97 cases, mass in 78, tenderness in 71, rigidity in 49, nausea in 23 and vomiting in 15. In nearly all cases in which results of examination of the blood was reported there was an increase in leukocyte content. Platelet count, bleeding time and coagulation time were (in all cases in which reported) within normal limits.

Treatment consists of making an incision directly over the mass, evacuating the clot and ligating the bleeding vessels. If the hematoma has not extended through the peritoneum into the abdominal cavity and there is no indication for the exploration of abdominal viscera, the peritoneal cavity need not be opened. If the wound is clean and dry, closure may be done without drainage; but if there is much oozing of blood from the torn ends of muscle tissue, as is frequently the case, it is best to drain the wound. Prognosis is generally favorable.

In a survey by the authors of the literature on the subject only one case was found in which a blood dyscrasia was known to exist. It is for this reason alone that the following case is reported.

REPORT OF A CASE

The patient, a 26-year-old white man, was seen the evening of December 10, 1953, with complaint of abdominal pain of eleven hours' duration. He stated that as he was sitting in a truck eating lunch a mild constant pain developed and he noticed a tender mass in the right suprapubic area. He had no nausea or vomiting. A normal bowel movement occurred after the onset of the pain but the character of the pain was not changed. The pain and swelling increased gradually during the following six hours and then remained constant. The pain was made worse by lying down and was eased by sitting. There was no history of recent strain such as lifting, coughing or sneezing. There was no history of bleeding in the patient or his family.

Upon physical examination it was noted that there was a well healed incision just below the angle of the left scapula. Located to the right of the mid-line and extending from the pubis to just below the umbilicus was a fusiform, tender mass about 4 cm. in width at its inferior pole and widening to about 8 cm. at the upper pole. There was no other area of

tenderness. Rebound tenderness was not elicited. Peristaltic sounds seemed to be normal. There appeared to be some slight hyper-resonance over the entire colon. No impulse was felt over the mass with cough or strain. Results of urinalysis and blood examination were within normal limits.

The patient was taken to the operating room where under a spinal anesthetic the right rectus sheath was opened. A hematoma completely filled the sheath. No active source of bleeding was observed. The hematoma was evacuated and the wound was closed with a drain in place. Postoperative recovery was uneventful. In an attempt to find the cause of the seemingly spontaneous bleeding, studies were made of the blood. Prothrombin time and platelet content were normal. Bleeding and clotting times were normal. However, there was no clot retraction at the end of 24 hours. Coagulation time by the Lee-White method was 35 minutes. On subsequent test there was complete clot retraction after 18 hours. Results of a prothrombin consumption test and a clot retraction measurement were both abnormal. The patient was told he probably had latent hemophilia and was warned of the possibility of pathologic bleeding.

SUMMARY

A brief discussion of hematomas of the rectus abdominis muscle is presented along with a report of one case in which an abnormal clotting mechanism would seem to play an important role.

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Certainly, let's talk about fees...

In this day and age I think we all are faced with many similar financial problems. Though our incomes may be derived from different sources, our expenditures, for the most part, consist of food, clothing, shelter and other expenses including medical care.

As your personal physician, you realize my income is solely from my fees; fees which I believe to be entirely reasonable. However, should you ever have any financial worries, I am most sincere when I say that *I invite you to discuss frankly with me any questions regarding my services or my fees. The best medical care is based on a friendly, mutual understanding between doctor and patient.*

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EDITORIAL

Multiphasic Surveys: "Streamlined Diagnosis" for the Public

THE DISTINGUISHED PRESIDENT of the American Hospital Association urged in 1952 that rapid "belt line" diagnostic service should be provided for the public, aided by availability of this service in prepayment plans.¹ The Council on Medical Service of the American Medical Association made a study of multiple screening programs, the results of which were summarized in the *Journal* for November 14, 1953 (153:1042). Multiple or multiphasic screening was defined as the use of two or more simple laboratory tests, examinations or procedures, applied rapidly and on a mass basis to determine presumptive evidence of unrecognized or incipient disease or defect. In other words, a preliminary step in diagnosis. The results of a series of multiple screening surveys were tabulated and showed that, in examinations involving over half a million people, approximately five per cent were found to have "serious disease." However, when efforts were made to do something about this disease, it was found that the screenee did not take action in from 1 to 50 per cent of cases. In other words, in as many as half of the cases of "serious disease" the person notified elected to take no action.

The motivation to pay attention to physicians' advice arises from many sources, notably interest in the welfare of one's dependents and fear of developing certain disease. It is well known that unless the individual himself takes active steps in the direction of seeking medical service, he is not likely to follow medical advice, especially while feeling comparatively well. This lack of successful follow-up naturally defeats the entire purpose of the survey, which is not (as many appear to think) an end in itself but rather a preliminary step in diagnosis which, if positive, should lead to effective action in connection with the prevention or cure of disease.

What is the yield of significant disease in the multiphasic surveys to date? The summary by the Council on Medical Service of the A.M.A. indicated "five per cent of serious disease."

A multiphasic screening survey was conducted in Los Angeles in February 1954.² It was offered to the 1000 employees of the Hoffman Radio and the Leach Relay corporations. Eight hundred sixty-two employees elected to accept it. The following "tests" were performed:

- Chest x-ray
- Height and weight "tests"
- Near and far vision tests
- Blood pressure determination
- Blood examination for anemia and diabetes
- Electrocardiogram on selected persons

Two hundred seventy-three persons were found to have some abnormality of weight or vision. These persons were urged to see their physician; apparently 72 did so.

One hundred ninety-four persons were found to have some abnormality other than the above. One hundred twenty-one of them apparently went to their physician or to some health agency.

Persons with x-ray films suspicious for tuberculosis were referred to their local health department.

Table 1 is a summary of the screening tests. Practicing physicians may judge for themselves the probable value (or shortcomings) of the criteria given.

In terms of specific entities, the following show the yield in recent general surveys:

1. *Tuberculosis*. Previously unknown cases of active pulmonary tuberculosis: 36 per 100,000 persons examined (Scarcello³). Drolet and Lowell found that only about 10 per cent of new registered cases of active tuberculosis are detected by means of survey procedures.⁴

2. *Heart disease*. Previously unknown cases of heart disease: 57 per 100,000 persons examined (Selzer⁵).

3. *Bronchogenic carcinoma*. Previously unknown cases of bronchogenic carcinoma: 8 per 100,000

TABLE 1.—Screening tests, test methods, and screening levels

Screening Test	Method	Screening Level
Height and weight.....	Height and weight taken with shoes on and coat off	20 per cent or more under or over midpoint of ideal weight range for medium frame. (Metropolitan Life Insurance Co. table.)
Vision.....	20/40 line of projected chart for distant vision; No. 4 type of Jaeger chart at 16 inches; with glasses if used	Inability to read 20/40 line of J-4 type with either eye
Chest x-ray.....	Miniature photofluorograph, 70 mm.	Abnormal shadows: films double read
Electrocardiogram.....	3-lead electrocardiogram	Cardiologist's reading
Blood pressure.....	Patient seated; mercury sphygmomanometer	Pressure greater than 150 mm. systolic or 95 mm. diastolic
Hemoglobin.....	Specific gravity determination of whole blood by copper sulfate method	Hemoglobin value less than 11 gm. per cent for women; 12 gm. per cent for men
Blood sugar.....	Wilderson-Heftmann method using capillary blood drawn 50-70 min. after ingestion of 50 gm. sucrose (in the form of lemonade)	Blood glucose over 160 mg. per cent

persons examined (Scamman⁶). Unfortunately on follow-up of these silent and potentially early carcinomas, it was found that they were resectable in less than half the cases and that fewer than half of the patients in the resectable group survived three years.

Periodic examination, when accompanied by positive action on the part of the patient, may be very helpful. However, when not accompanied by intelligent action, it may have the following disadvantages:

1. If the report is negative, the person acquires a false sense of security; while disease may not be evident at the time of survey, it can develop a few weeks or months later, but the person is inclined to pay little heed to symptoms and delays going to his physician because "he was well at the survey."

2. It may and demonstrably does cause undue apprehension in persons with "false positive" diagnosis. This is noteworthy in connection with transient glycosuria or hypertension, small pulmonary inflammatory processes or benign tumors, and so forth.

3. It can result in considerable expense to those who are reported as having findings suggestive of disease, but in whom disease is not confirmed on regular examination.

4. Most multiphasic screening techniques leave no opportunity for appraisal of the "negative" group by a physician; yet in this group will be persons who need medical attention. (For example, persons with normal x-ray film of the chest but with active tracheobronchial tuberculosis or many forms of heart disease.)

Public health agencies attempt to protect the community against communicable diseases. Many welfare agencies attempt to secure funds for research so that specific diseases may be prevented or conquered. Diseases of high communicability are recognized public health problems, but diseases of non-communicable nature are the province of regular

practice and are undoubtedly most effectively cared for by personal physicians.

Smiley⁷ defined multiphasic screening as "inferior medicine, short-cut medicine and poor public health." Haven Emerson⁸ echoed that belief in his discussion on medical care and public health services. It would seem from the experience to date that multiphasic screening, while superficially appealing, is, in fact, a poor way of improving the public health. Further, it is an extremely expensive way for the public if all of the costs are listed.⁹ It gives the semblance of scientific accuracy on a mass basis, but yields little in concrete improvement for most of the persons concerned. It is a mechanized, impersonal and incomplete service.

Despite these critical appraisals by experts, some welfare groups and labor organizations in California continue to promote multiphasic campaigns among employee groups. Health and welfare funds are being used to defray part of the costs involved. It is therefore desirable that members of the medical profession be fully informed as to the apparent value of these types of medical screening procedures. If it can be shown that they have had some lasting educational benefit, then the surveys now being completed will not have been altogether in vain.

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California MEDICAL ASSOCIATION

NOTICES & REPORTS

Executive Committee Minutes

Tentative Draft: Minutes of the 344th Meeting of the Executive Committee, San Francisco, July 10, 1954.

The meeting was called to order by Chairman Heron in Room 212 of the St. Francis Hotel, San Francisco, at 3:00 p.m., Saturday, July 10, 1954.

Roll Call:

Present were President Morrison, President-Elect Shipman, Council Chairman Lum, Auditing Committee Chairman Heron and ex-officio, Editor Wilbur.

Absent for cause, Speaker Charnock and, ex-officio, Secretary Daniels.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Clancy and Thomas of C.M.A. staff; legal counsel Hassard; K. L. Hamman of California Physicians' Service; Rollen Waterson, health insurance consultant; Dr. Francis J. Cox and Dr. Hollis L. Carey.

1. Committee on Adoptions:

Discussion was held on appointments to a Committee on Adoptions, referred by the Council. On motion duly made and seconded, it was voted to appoint Dr. Dan O. Kilroy of Sacramento, chairman, and Drs. George K. Herzog, Jr., of San Francisco and Donald G. Tollefson of Los Angeles as members.

2. Committee on Public Relations:

On motion duly made and seconded, it was voted to notify the chairman of the Committee on Public Relations of the opinion of the Council that a study be made of all public relations expenditures of the Association and of California Physicians' Service.

3. Organization Expense:

The committee was advised of the receipt of a statement for \$3,000 plus odd expenses for additional legal services in the case now pending before

the State Supreme Court. Funds for this statement had previously been authorized by Council action.

4. Committee on Blue Cross-Blue Shield:

In accordance with the Council's referral, it was agreed to notify the three Blue Shield and Blue Cross plans in California of the Council's decision that a joint committee on coordination be maintained following the discharge of an earlier committee.

5. Committee on Industrial Accident Commission:

Dr. Francis J. Cox, chairman of the Committee on Industrial Accident Commission, reported that on July 9 the Industrial Accident Commission had approved a fee schedule, to be effective October 1, 1954, granting an estimated 15.1 per cent increase over present fees.

6. California Physicians' Service Fees:

Dr. Cox, as chairman of the subcommittee on fees of the Medical Services Commission asked (1) whether the Association or C.P.S. had the ultimate authority to formulate a C.P.S. schedule, and (2) who has the ultimate authority to allocate the division of fees with relation to the funds available.

On motion duly made and seconded, it was voted to approve the following statement:

ARLO A. MORRISON	President
SIDNEY J. SHIPMAN, M.D.	President-Elect
DONALD A. CHARNOCK, M.D.	Speaker
WILBUR BAILEY, M.D.	Vice-Speaker
DONALD D. LUM, M.D.	Council Chairman
ALBERT C. DANIELS, M.D.	Secretary-Treasurer
IVAN C. HERON, M.D.	Chairman, Executive Committee
DWIGHT L. WILBUR, M.D.	Editor
JOHN HUNTON	Executive Secretary
General Office, 450 Sutter Street, San Francisco 8	
ED CLANCY	Director of Public Relations
Southern California Office:	
417 South Hill Street, Los Angeles 13 • Phone MAdison 6-0683	

"The Executive Committee of the California Medical Association reaffirms the action of the House of Delegates, taken in 1946, in stating 'that the Board of Trustees of California Physicians' Service revise the fee schedule biennially, this revision to be made upon the recommendation of a committee appointed by the Council of the California Medical Association.' The Fee Schedule Committee of the Medical Services Commission at present serves this purpose and reports its actions to the Commission and, through it, to the Council for transmittal to the Board of Trustees of California Physicians' Service. The Board of Trustees of California Physicians' Service has final authority in adopting a fee schedule."

7. *Public Relations:*

A request from the San Francisco Medical Society for the allocation of \$50 monthly for nine months, to permit sending the county bulletin to medical students in the area, was presented and discussed. On motion duly made and seconded, it was voted to consider this a local project which should be handled with local funds.

8. *Health Insurance Consultant:*

Rollen Waterson presented a report, including several recommendations, and suggested that an 11 per cent increase in the present recommended C.P.S. fee schedule be approved as an interim step prior to adoption of a new fee schedule to serve in cases of members' incomes of between \$4,200 and \$6,000 annually.

Mr. Hamman stated that if two income ceilings could be operated simultaneously, an increase of 30 to 35 per cent in fees could probably be accomplished for the higher income ceiling group.

On motion duly made and seconded, it was voted to approve a series of recommendations, as follows: (1) That the temporary interim fee schedule be returned to the Medical Services Commission with new instructions; (2) that, in addition to fee increases now proposed, there be sufficient further increases of other fees to raise the estimated total payment to physicians to 11 per cent; (3) that a separate and more satisfactory schedule be promptly drawn up—independent of the \$4,200 schedule—for the long-range \$6,000 income ceiling formula; and (4) that C.P.S. and Rollen Waterson be requested to design the long-range \$6,000 income ceiling plan and to submit it to the C.M.A. Executive Committee at the earliest possible date.

The motion adopting these recommendations called for a recognition of the urgency of carrying out these proposals.

Mr. Waterson presented a budget for his activities through the month of August, which, with some revisions, was approved.

9. *Committee on Malpractice Insurance:*

On motion duly made and seconded it was voted to appoint the following members to the Special Committee on Malpractice Insurance created by the Council at its meeting of May 12, 1954 (Item 28): Joseph F. Sadusk, Jr., M.D., Oakland; David O. Harrington, M.D., San Francisco; Wilbur Bailey, M.D., Los Angeles; William F. Quinn, M.D., Los Angeles; J. J. O'Hara, M.D., San Diego; Verne G. Ghormley, M.D., Fresno; Albert Currin, M.D., Milpitas; Bernard Silber, M.D., Redwood City; Paul Frame, Jr., M.D., Sacramento; John Wood, M.D., Anaheim; Carl M. Hadley, M.D., San Bernardino; Denver D. Roos, M.D., Corona; John Ellis, M.D., Taft; H. I. Burtness, M.D., Santa Barbara; J. J. Heffernan, M.D., Stockton.

It was further voted to appoint Dr. Sadusk chairman, and Dr. Harrington secretary, of this committee; and to appoint Drs. Sadusk, Bailey, Harrington, Ghormley and O'Hara as the Executive Committee of the Special Committee on Malpractice Insurance.

10. *California Tuberculosis & Health Association:*

Dr. Shipman presented a request from the California Tuberculosis & Health Association for naming an Association representative to become a member of a committee on protective budgets for tuberculosis patients. On motion duly made and seconded, it was voted to approve such an appointment, Dr. Shipman to suggest the appointee.

11. *State Department of Public Health:*

On motion duly made and seconded, it was voted to accept with regret the resignation of Dr. John W. Green as a member of a committee to meet with the State Department of Public Health in discussions relative to recognizing specialists from other groups in the handling of crippled children's cases.

On motion duly made and seconded, it was voted to appoint Dr. Robert C. Martin of San Francisco to succeed Dr. Green.

On motion duly made and seconded, it was voted to refer to the Committee on Public Health and Public Agencies a request from the State Department of Public Health for appointment of one obstetrician and one pediatrician to consider the question of greater utilization of maternity beds in hospitals.

12. *Medical Services Commission:*

On motion duly made and seconded, it was voted to refer to the Council, by mail vote, a request of the Medical Services Commission for the Association to pay for the printing and distribution of Usual Fee survey forms to the county societies, when the cost of such printing is known.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 7:30 p.m.

IVAN C. HERON, M.D., *Chairman*

DONALD D. LUM, M.D., *Acting Secretary*

CALIFORNIA MEDICAL ASSOCIATION

Annual Meeting

SAN FRANCISCO

May 1-5, 1955

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) not later than November 20, 1954.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association not later than December 1, 1954. (No exhibit shown in 1954, and no individual who had an exhibit at the 1954 session, will be eligible until 1956.

Medical Motion Pictures

Applications are now being received for the program of the Medical Motion Pictures Section. Please submit your application to Arthur E. Smith, M.D., Chairman, Medical Motion Pictures Section, 1930 Wilshire Boulevard, Los Angeles 57, California.

SCIENTIFIC PAPERS

SCIENTIFIC EXHIBITS

MEDICAL MOTION PICTURES

PLANNING MAKES PERFECT

AN EARLY START HELPS

SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY Ben C. Eisenberg
2680 Saturn Avenue, Huntington Park

ANESTHESIOLOGY John P. Howard
2558 4th Avenue, San Diego 3

DERMATOLOGY AND SYPHILOLOGY . R. Raymond Allington
3115 Webster Street, Oakland 9

EYE, EAR, NOSE AND THROAT—

ENT Francis A. Sooy (Chairman)
490 Post Street, San Francisco 2

EYE Robert N. Shaffer
490 Post Street, San Francisco 2

GENERAL MEDICINE Roger O. Egeberg
Wadsworth General Hospital, Los Angeles

GENERAL PRACTICE Stanley R. Parkinson
326 G Street, Marysville

GENERAL SURGERY Lyman A. Brewer, III
2010 Wilshire Boulevard, Los Angeles 57

INDUSTRIAL MEDICINE AND
SURGERY Homer S. Elmquist (Asst. Secretary)
629 S. Westlake, Los Angeles 57

OBSTETRICS AND GYNECOLOGY George Judd
2010 Wilshire Boulevard, Los Angeles 57

PATHOLOGY AND BACTERIOLOGY Orlyn B. Pratt
312 North Boyle Avenue, Los Angeles 33

PEDIATRICS Milo B. Brooks
1015 Gayley Avenue, Los Angeles 24

PSYCHIATRY AND NEUROLOGY Knox H. Finley
450 Sutter Street, San Francisco 8

PUBLIC HEALTH E. M. Bingham
130 South American, Stockton

RADIOLOGY Merrell A. Sisson
450 Sutter Street, San Francisco 8

UROLOGY Wilson Stegeman
1166 Montgomery Drive, Santa Rosa

In Memoriam

COMFORT, HAROLD W. Died in Fortuna, June 17, 1954, aged 60, of coronary artery disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1925. Licensed in California in 1925. Doctor Comfort was a member of the Humboldt County Medical Society.



DIALON, ISMAR. Died in Los Angeles, July 3, 1954, aged 57, of coronary artery disease. Graduate of Ludwig-Maximilians-Universität Medizinische Fakultät, München, Bavaria, Germany, 1923. Licensed in California in 1940. Doctor Dialon was a member of the Los Angeles County Medical Association.



FILIPELLO, EUGENE A. Died in San Jose, July 12, 1954, aged 85. Graduate of Regia Università di Torino Facoltà di Medicina e Chirurgia, Italy, 1894. Licensed in California in 1895. Doctor Filipello was a retired member of the Santa Clara County Medical Society, the California Medical Association, and an associate member of the American Medical Association.



HOPKIRK, CLARENCE C. Died in Santa Monica, July 10, 1954, aged 69. Graduate of Northwestern University Medical School, Chicago, Illinois, 1910. Licensed in California in 1925. Doctor Hopkirk was a retired member of the Los Angeles County Medical Association, and the California Medical Association, and an associate member of the American Medical Association.



JENKINS, HARRY L. Died in Arcata, July 7, 1954, aged 57. Graduate of the University of California Medical School, Berkeley-San Francisco, 1925. Licensed in California in 1925. Doctor Jenkins was a member of the Humboldt County Medical Society.



KIRWIN, JOSEPH J. Died in San Diego, July 4, 1954, aged 53, of cerebral hemorrhage. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1927. Licensed in California in 1927. Doctor Kirwin was a member of the San Diego County Medical Society.



LELAND, JOHN T. Died in Mill Valley, July 20, 1954, aged 80. Graduate of The Hahnemann Medical College and Hospital, Chicago, Illinois, 1899. Licensed in California in 1942. Doctor Leland was a retired member of the Marin County Medical Society, and the California Medical Association, and an associate member of the American Medical Association.



LOEWENBERG, RICHARD D. L. Died in Bakersfield, April 29, 1954, aged 55, of cerebral hemorrhage. Graduate of Hamburgische Universität Medizinische Fakultät, Hamburg, Germany, 1923. Licensed in California in 1938. Doctor Loewenberg was a member of the Kern County Medical Society.

METZNER, ABRAHAM. Died in Los Angeles, July 6, 1954, aged 68, of chronic artery disease. Graduate of the Cleveland-Pulte Medical College, Ohio, 1912. Licensed in California in 1922. Doctor Metzner was a member of the Los Angeles County Medical Association.



MUSSELMAN, WENDELL H. Died in Burlingame, August 7, 1954, aged 54. Graduate of the University of California Medical School, Berkeley-San Francisco, 1927. Licensed in California in 1928. Doctor Musselman was a member of the San Mateo County Medical Society.



OLSEN, XENOPHON. Died in San Bernardino, July 13, 1954, aged 82. Graduate of the University Medical College of Kansas City, Missouri, 1900. Licensed in California in 1927. Doctor Olsen was a retired member of the San Bernardino County Medical Society, the California Medical Association, and an associate member of the American Medical Association.



PIPER, HARRY E. Died in Santa Cruz, July 24, 1954, aged 77. Graduate of the University of California Medical School, Berkeley-San Francisco, 1902. Licensed in California in 1902. Doctor Piper was a member of the Santa Cruz County Medical Society.



PORTIS, SIDNEY ALEXANDER. Died in Baltimore, Maryland, May 24, 1954, aged 59, of hepatitis. Graduate of Rush Medical College, Chicago, Illinois, 1919. Licensed in California in 1949. Doctor Portis was a member of the Los Angeles County Medical Association.



ROSENBLATT, JOSEPH. Died in Kerrville, Texas, July 23, 1954, aged 70, of disease of the kidney. Graduate of Long Island College of Medicine, Brooklyn, New York, 1915. Licensed in California in 1935. Doctor Rosenblatt was a member of the Los Angeles County Medical Association.



SCHWARZ, JACOB. Died in San Francisco, July 20, 1954, aged 71. Graduate of the University of California Medical School, Berkeley-San Francisco, 1904. Licensed in California in 1904. Doctor Schwarz was a member of the San Francisco Medical Society.



WALKER, JAMES D. Died in Los Angeles, July 15, 1954, aged 73. Graduate of the University of Minnesota Medical School, Minneapolis, 1909. Licensed in California in 1922. Doctor Walker was a member of the Los Angeles County Medical Association.



WILLIAMS, CARL G. Died in Brentwood, July 7, 1954, aged 57, of coronary artery disease. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1923. Licensed in California in 1923. Doctor Williams was a member of the Los Angeles County Medical Association.



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

TELEPATHY, PERHAPS?

In my inaugural remarks on May 11, I urged our Auxiliary members to adopt as their theme song "Accentuate the Positive, Eliminate the Negative, and Latch on to the Affirmative." In the May 29 issue of the *Journal of the American Medical Association*, the monthly message from President Edward J. McCormick, M.D., stated, "The time has come for us to embark on a campaign to 'Accentuate the Positive.'"

In everything we say and do, we try to "Accentuate the Positive"—to stress what's *right* with the medical profession. Collectively and individually, our Auxiliary members help to mould public opinion through our contacts with other individuals and other organizations. We are *not* "just another Woman's Club"—we are a service group, working closely with our A.M.A., C.M.A. and the component county medical societies in their program for the advancement of medicine and public health.

THEY ACCENTUATE THE POSITIVE

The Kern County Auxiliary, with 99 members, pledged a total of \$8,000 to the Hospital Building Fund which will provide a 103-bed hospital and repairs to the earthquake-damaged Mercy Hospital. Six thousand dollars of this pledge has already been paid. The Kern members also sponsor two student nurses, giving each girl a scholarship totaling \$450 for the three-year training course.

All of our counties participate in nurse recruitment, and during the coming months we'll tell you what each group is doing to stimulate interest in nursing as a career for the young women in their communities.

HAPPINESS FOR THE OLD FOLKS

Gifts are not limited to money—our Auxiliary members give of their time and their talents, too, to make life happier for those who are less fortunate. In San Francisco, 56 Auxiliary members worked for three days last Christmas, filling stockings and decorating the wards and halls at Laguna Honda, a home for convalescent and aged patients. They also supplied and cut out felt for toy animals which the patients finished and sold for spending money. The Auxiliary also provided new curtains and cushions for the woman's day room at the Home.

DIVIDENDS FROM DISCARDS

Many a doctor has lost his favorite old fishing-hat to that popular fund-raiser, the rummage sale. The Solano County Auxiliary hit an all-time high at their rummage sale last year, netting \$1,265. Proceeds went to the children's ward at the Napa State Hospital, Marshal Porter School for Retarded Children, Campfire Camperships, and to other local philanthropic projects.

HEALTH EDUCATION FOR THE PUBLIC

Typical of the projects in health education sponsored by our county auxiliaries were the three programs presented by the Alameda County Auxiliary. Their annual Open Meeting featured a panel discussion on "The Median Fee Survey" with Mr. Rollen Waterson as moderator and a group of physicians as participants. At a second program, speakers from various professions presented a panel for the Oakland Public School Vocation Day, with the Auxiliary president discussing the field of nursing. A third project was that of scheduling speakers from the county Heart Association for interested groups in the East Bay.

WE WORK WITH OUR ADVISORY BOARD

As you read about our many projects and activities, you might find it reassuring to know that we do not adopt any policy or engage in any new activity without previous approval of our Advisory Board, nor do we speak on behalf of the medical profession without their sanction.

On the state level, our advisors are Arlo A. Morrison, M.D., president of the C.M.A.; Sidney J. Shipman, M.D., president-elect; Albert C. Daniels, M.D., secretary; Matthew N. Hosmer, M.D., of San Francisco, and John E. Vaughan, M.D., of Bakersfield. Mr. Robert L. Thomas, assistant executive secretary of the California Medical Association, serves as liaison officer between our Auxiliary and the Advisory Board.

Most of the county medical societies have advisory boards for their Auxiliaries; where there is no such board, approval for our activities is given by the board of directors of the medical society.

MRS. FREDERICK J. MILLER, *President*

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

Appointment of Mr. Jerry Pettis, formerly associate director of public relations of the California Medical Association, to the newly created position of executive assistant to the president of the Los Angeles County Medical Association, was announced last month. The appointment was a part of a program for strengthening the public relations of the county society. Before serving the C.M.A., Mr. Pettis was assistant to the president of United Air Lines.

* * *

The Society of Graduate Internists of Los Angeles County Hospital will hold a **Symposium of Internal Medicine**, November 12-14. Meetings will be held at the Ambassador Hotel November 12 and 13 and at the Los Angeles County General Hospital November 14. In addition there will be a dinner at Ciro's, Saturday evening, November 13.

The symposium will be made up of talks, informal group discussions, panels and patient presentations. The speakers will be: Dr. Max Wintrobe, professor of medicine, University of Utah; Dr. Chester Keefer, director of Evans Memorial Hospital, Boston; Dr. C. J. Watson, professor of medicine, University of Minnesota; and Dr. William Sodeman, professor of medicine, University of Missouri.

* * *

The Los Angeles County Heart Association will hold its 24th annual **Professional Symposium on Heart Disease** October 13 and 14 at the Wilshire Ebell Theatre, Los Angeles. Among the speakers will be Dr. E. P. Sharpey-Schafer of St. Thomas Hospital Medical School, London; Sir Russell Brock, London; Dr. Viking Olof Bjork, Stockholm; Dr. Manuel René Malinow, Buenos Aires; Dr. F. H. Smirk, University of Otago Medical School, New Zealand; and Dr. Charles T. Dotter, head of the department of radiology, University of Oregon.

* * *

The Southern California Psychiatric Society will present a program on "Community Needs and Contributions Related to Preventive Psychiatry," Friday, October 1, at the Institute of Aeronautical Sciences, 7660 Beverly Boulevard, Los Angeles. The meeting, which will start at 8:00 p.m., will be a panel discussion.

* * *

The Council of the Los Angeles County Medical Association has appointed Dr. Joseph M. de los Reyes as vice-president of the association to fill the unexpired term of Dr. Clair Cosgrove, who died June 29. Dr. de los Reyes has been a member of the council since 1945 and chairman of the indoctrination committee since 1946.

NAPA

The Industrial Fair held last month in Napa featured an exhibit, "Cancer Quacks Kill." Sponsored by the Napa County Medical Society, the county health department and

the local division of the National Cancer Society, the highly popular exhibit acquainted people with the activities of quacks in cancer treatment and pointed up positive measures of sponsoring agencies in combating such activities. Some 20 local physicians, aided by representatives of the Food and Drugs Division of the California Department of Public Health, were on hand throughout the week-long event to explain the various confiscated devices, drugs and cancer "cures." Dr. Edward R. Pinckney, county health officer, was in charge of the exhibit where the American Medical Association pamphlets, "Quack" and "Why Wait?," were distributed.

SAN DIEGO

A symposium on heart disease sponsored by the San Diego County Heart Association will be held Friday, October 15, at the U. S. Naval Hospital in Balboa Park, San Diego. Among guest speakers will be Sir Russell Brock and Dr. E. P. Sharpey-Schafer of London, Dr. Hurley Motley of Los Angeles and Dr. Julius Jensen of Las Vegas, Nevada.

SAN FRANCISCO

Dr. Otto Barkan was chosen as the recipient this year of the Prize in Ophthalmology given annually by the Section on Ophthalmology of the American Medical Association. The executive committee of the section selected Dr. Barkan because of his work on glaucoma, particularly for devising and perfecting the goniotomy operation for congenital glaucoma. Dr. Arthur Bedell, a former prize winner, was chosen to bestow the prize winner's medal upon Dr. Barkan.

* * *

The 25th Annual Postgraduate Symposium on Heart Disease of the San Francisco Heart Association will be held October 6, 7 and 8 at Larkin Hall in San Francisco. Cooperating in the presentation are the heart associations of Alameda, Marin, Monterey, San Mateo, Santa Clara and Sonoma counties.

The program follows:

WEDNESDAY MORNING, OCTOBER 6—9:00 A.M.-12:00 M.

Electrocardiography and Roentgenology in Cardiac Diagnosis
Presiding: David A. Rytand, M.D.

9:00-10:30 a.m.—Electrocardiographic-Roentgenologic Pathologic Conference.

Moderator: David A. Rytand, M.D.

Participants: Pedro Cossio, M.D., Charles T. Dotter, M.D., Manuel René Malinow, M.D., F. Horace Smirk, M.D., F.R.C.P.

10:30-10:45 a.m.—Recess.

10:45-11:20 a.m.—Angiocardiography in Acquired Cardiac Disease—Charles T. Dotter, M.D. Discussion by Herbert L. Abrams, M.D.

11:20-12:00 m.—Electrocardiography in Acquired Cardiac Disease—Pedro Cossio, M.D. Discussion by Robert L. Smith, Jr., M.D.

WEDNESDAY AFTERNOON, OCTOBER 6—1:30-5:00 P.M.

Detection and Treatment of Cardiac Disease in Childhood
Presiding: Edward Campion, M.D.

President, Northern California Pediatric Society

1:30-2:30 p.m.—Rheumatic Fever, a Global Disease; Current Trends in Two Hemispheres, with Reference to Diagnosis, Incidence, and Treatment.

Moderator: Lowell A. Rantz, M.D.

Participants: Manuel René Malinow, M.D., Helen Pryor, M.D., F. Horace Smirk, M.D., F.R.C.P., Harold H. Rosenblum, M.D.

2:30-3:15 p.m.—Angiocardiography in Congenital Heart Disease—Charles T. Dotter, M.D. Discussion by Earl Miller, M.D.

3:15-3:30 p.m.—Recess.

3:30-4:10 p.m.—The Influence of Cardiac Surgery on Cardiology—Sir Russell Brock, M.S., F.R.C.S.

- 4:10-4:50 p.m.—Surgical Treatment of Interauricular Septal Defect—Viking Olof Bjork, M.D.
4:50-5:00 p.m.—Discussion by Frank Gerbode, M.D.

THURSDAY MORNING, OCTOBER 7—9:00 A.M.-12:00 M.

Physiologic Concepts Applied to Diagnosis and Treatment of Cardiac Disease

Presiding: Frank Gerbode, M.D.

- 9:00-9:50 a.m.—Venous Pulse—Pedro Cossio, M.D. Discussion by Arthur Selzer, M.D.
9:50-10:40 a.m.—Left Heart Catheterization—Viking Olof Bjork, M.D. Discussion by Herbert N. Hultgren, M.D.
10:40-11:05 a.m.—Recess.
11:05-12:00 m.—Present Day Status of Intracardiac Surgery: Report of Results—Sir Russell Brock, M.S., F.R.C.S. Discussion by H. Brodie Stephens, M.D.

THURSDAY AFTERNOON, OCTOBER 7—1:30-5:00 P.M.

Arteriosclerosis and Hypertension

Presiding: Arthur R. Twiss, M.D.

- 1:30-2:30 p.m.—Treatment of Hypertension: Principles—F. Horace Smirk, M.D., F.R.C.P.
2:30-3:30 p.m.—Fundamental Problems in Atherosclerosis. Manuel René Malinow, M.D. Discussion by John W. Gofman, M.D.
3:30-3:45 p.m.—Recess.
3:45-5:00 p.m.—Treatment of Hypertension: Results—F. Horace Smirk, M.D., F.R.C.P. Discussion by Maurice Sokolow, M.D.

FRIDAY MORNING, OCTOBER 8—9:00 A.M.-12:00 M.

Clinical Heart Disease: The Arrhythmias

Presiding: Hilliard J. Katz, M.D.

- 9:00-9:30 a.m.—President's Address: Cardiac Arrest in Surgery—Frank Gerbode, M.D. (Illustrated by Colored Movie.)
9:30-10:10 a.m.—Premature Systole—F. Horace Smirk, M.D., F.R.C.P.
10:10-10:50 a.m.—Mechanisms Involved in the Prevention of Cardiac Arrhythmias—Manuel René Malinow, M.D. Discussion by John J. Sampson, M.D.
10:50-11:05 a.m.—Recess.
11:05-12:00 m.—Panel on Treatment of Arrhythmias.
Moderator: Maurice Sokolow, M.D.
Participants: Pedro Cossio, M.D., Francis L. Chamberlain, M.D., Manuel René Malinow, M.D., F. Horace Smirk, M.D., F.R.C.P.

FRIDAY AFTERNOON, OCTOBER 8—1:30-5:00 P.M.

Clinical Session

Presiding: Arthur L. Bloomfield, M.D.

Participants: Viking Olof Bjork, M.D., Sir Russell Brock, M.S., F.R.C.S., Pedro Cossio, M.D., Charles T. Dotter, M.D., Frank Gerbode, M.D., J. K. Lewis, M.D., Manuel René Malinow, M.D., F. Horace Smirk, M.D., F.R.C.P., Maurice Sokolow, M.D., Forrest M. Willett, M.D.

SONOMA

Medical displays and demonstrations combined with regular film showings were highlights of the Sonoma County Fair, held recently. The exhibit was sponsored by the Sonoma County Medical Society in cooperation with local voluntary health agencies. Several thousand people were attracted to the exhibit, where members of the medical society and student nurses were on hand to answer questions.

TUOLUMNE

Dr. James M. Busi, formerly of Jackson, recently was appointed county physician of Amador County by the board of supervisors. Dr. Busi, whose new headquarters are in Sonoma, succeeds Dr. Harold E. Schwing, who resigned the post last July 1 and moved to Sacramento. Dr. George Richardson served as county physician pro tem between the resignations of Dr. Schwing and the appointment of Dr. Busi.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Fall schedule:

Surgical Anatomy—September 8 to November 10, 1954.

Fundamental Principles of Radioactivity—September 16 to July 7, 1955.

Annual Evening Medical Lecture Series—September 27 to December 13, 1954.

Dermal Abrasives—Planing Techniques—September 29 to November 3, 1954.

Application of Principles of Industrial Medicine to Private Practice—October 13 to December 8, 1954.

Anesthesiology—November 4 to 5, 1954.

Dermatology in General Practice—November 10 to December 15, 1954.

In Riverside:

Three-day Symposium: Peripheral Vascular Diseases—October 6. Highlights of Clinical Endocrinology—October 13.

Problems in Anesthesia—October 20, 1954.

In Long Beach:

Problems in Urology—October 7, 14, 21, 1954.

Cardiology—November 4, 11, 18, 1954.

Office Gynecology—January 6, 13, 20, 1954.

Contact: Mrs. Margaret H. Griffith, Assistant Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Conference on General Surgery

Date: September 13 through 17, all day, at Medical Center. This conference will be offered for the purpose of stressing the newer concepts, methods of diagnosis, treatment and techniques in surgery. Throughout the session emphasis will be placed on the diagnosis and treatment of malignant lesions. Instruction will consist of didactic periods, panel discussions, and actual operative demonstrations which will be televised from the operating room to the lecture hall. This program will be designed for general practitioners who are doing surgery. The class will be limited.

Conference on Fractures and Diseases of the Bone

Date: September 20 through 23, all day, San Francisco County Hospital. The program will cover the newer concepts, methods of diagnosis, treatment and techniques. There will be didactic lectures, panel discussions, and actual demonstrations of illustrative cases. The class will be limited.

Medicine for General Practitioners

Date: September 21 to December 7, Tuesday evenings, East Oakland Hospital, Oakland. This is a continuation course which is offered every year, with complete change of program and speakers. Class limited.

Evening Lectures in Medicine, Part I and Part 2

Date: September 16 through December 9, Thursday evenings, Mills Memorial Hospital, San Mateo. This is also a continuation course which will be of interest to both internists (Part 1) and to physicians in general practice (Part 2).

Symposium on Endocrine Diseases and Geriatrics

Date: October 22, 23, 24 (week-end), University of California Extension Building, 540 Powell Street, San Francisco. A review of recent developments in both fields, with suggestions for the management of patients past the age of fifty.

Contact: Stacy R. Mettier, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22, California.

UNIVERSITY OF SOUTHERN CALIFORNIA

Dermatology and Syphilology—Beginning September 13, 1954. Fee: \$1,000.

This is a full-time course of twelve-month duration, carries thirty-two units credit toward the graduate degree of Master of Science, and is accredited by the American Board of Dermatology and Syphilology. It is designed for physicians who plan to take the examination for certification by the Board. Dr. Maximilian E. Obermayer is the course director. The course is presented only every third year and open to not more than twelve qualified physicians.

Intensive Review of Internal Medicine, Course No. 855—September 20 to October 1, 1954. Fee: \$50.00.

This course is designed primarily for students planning to take the examination of the American Board of Internal Medicine. Forty hours of didactic lectures, 8:00 a.m. to 12:30 p.m., Monday through Friday. It will cover the fields of Cardiology, Endocrinology, Gastroenterology, Hematology, Infectious Diseases, Renal Diseases, Arthritis, Nutrition, Neurology, and Isotopes. Enrollment limited to 50 students, applications accepted to August 15. Course director is Donald W. Petit, M.D. Gastroenterology, No. 844, beginning September 20, 1954, one year, full time. This is a full time course designed to give a limited number of qualified physicians advanced training in this field. Didactic courses will include intensive study of physiology and pathology as well as the clinical aspects of the diseases of the digestive tract. Clinical teaching will be done in the out-patient department and on the wards of the Los Angeles County Hospital. Emphasis will be placed on the clinical approach using such diagnostic aids as sigmoidoscopy, peritoneoscopy and gastroscopy as indicated. Opportunities will be available to observe fluoroscopic examination, as well as the interpretation of the x-rays of each case. Director, George K. Wharton, M.D.

Contact: Robert S. Cleland, M.D., director, Medical Extension Education, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33, California.

STANFORD UNIVERSITY

Internal Medicine—September 13, 14, 15, 16, 17, 1954; 8:30 a.m. to 12:00 noon, 1:30 p.m. to 5:00 p.m., Stanford Hospital. Fee: \$75.00. Limited to 30 physicians.

General Surgery and Surgical Anatomy, September 13, 14, 15, 16, 17, 1954; 8:30 a.m. to 12:00 noon, 1:30 p.m. to 5:00 p.m., Stanford Hospital. Fee: \$100.00. Limited to 20 physicians.

Surgical Emergencies, including Fractures and Associated Trauma—September 15, 16, 17; 9:00 a.m. to 12:00 noon, 1:00 p.m. to 4:30 p.m., San Francisco Hospital. Fee: \$50.00. Registration unlimited.

Contact: Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

CALIFORNIA MEDICAL ASSOCIATION, POSTGRADUATE ACTIVITIES

A Circuit Course of Postgraduate Lectures will be given in the Sacramento Valley cities of Dunsmuir, Chico, Marysville, and Auburn, during the fall months of 1954. Lecturers are from the faculty of Stanford University Medical School. The weeks of October 11 to 14, Surgical Problems in Childhood and Infants, Dr. L. R. Chandler; November 1 to 4, Selected Topics in Obstetrics and Gynecology, Dr. Lyman Stowe; November 15 to 19, Antibiotics, Dr. Lowell A. Rantz; December 6 to 9, Practical Problems in Clinical Endocrinology, Dr. Francis Greenspan.

Contact: C. A. Broadus, M.D., Director of Postgraduate Activities, P. O. Box A-1, Carmel, California.

Medical Dates Bulletin

THIS BULLETIN of the dates of postgraduate education assemblies and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: C. A. Broadus, M.D., P. O. Box A-1, Carmel, California.

OCTOBER

American Cancer Society, California Division, Cancer Conference, Palace Hotel, San Francisco, October 1, 1954—2:00-5:00 p.m.

California Society of Internal Medicine, Yosemite National Park, October 2, Walter Beckh, M.D., 384 Post Street, Suite 603, San Francisco 8.

San Francisco Heart Association, 25th Annual Postgraduate Symposium on Heart Disease, October 6-7-8, Gladys Taylor Daniloff, 604 Mission Street, San Francisco 5.

Los Angeles County Heart Association, Annual Professional Symposium on Heart Disease, October 13-14, Mr. Robert Pike, executive director, 316 S. Bonnie Brae, Los Angeles.

San Diego County Heart Association, Annual Professional Symposium on Heart Disease, Friday, October 15, H. Jack Hardy, executive director, 1651 Fourth Avenue, San Diego 1.

California Academy of General Practice, Sixth Annual Scientific Assembly, Los Angeles, October 24, 25, 26, 27, Wm. W. Rogers, executive secretary, 461 Market Street, San Francisco.

Orthopaedic Hospital, Comprehensive Five-day Course in Poliomyelitis, October 25 to 29, 1954, C. L. Lowman, M.D., 2400 S. Flower Street, Los Angeles 7.

NOVEMBER

Los Angeles Urologic Research Convention, Los Angeles, November 8-12.

JANUARY

American College of Surgeons, Palm Springs, January 21-22, 1955.

CALIFORNIA MEDICAL ASSOCIATION, Annual Session, San Francisco, May 1-5, 1955.

AMERICAN MEDICAL ASSOCIATION

Clinical Session, 1954, Miami, November 30-December 3.

Annual Session, 1955, Atlantic City, June 6-10.

Clinical Session, 1955, Boston, November 29-December 2.



THE PHYSICIAN'S *Bookshelf*

MEDICAL TREATMENT OF DISEASE—The Oxford Medicine—Volume VIII. By various authors: Henry A. Christian, A.M., M.D., LL.D., Sc.D.(Hon.), M.A.C.P.(Hon.), F.R.C.P.(Can.), D.S.M.(A.M.A.). Hersey Professor of the Theory and Practice of Physics, Harvard University, Sometime Clinical Professor of Medicine, Tufts Medical School; Physician-in-Chief Emeritus, Peter Bent Brigham Hospital; Dale G. Friend, A.B., M.S., M.D., F.A.C.P., Associate in Medicine, Harvard Medical School; and Maurice A. Schnitker, B.S., M.D., F.A.C.P., Director of Medicine, St. Vincent's Hospital, Toledo. Oxford University Press, 114 Fifth Ave., New York 11, N. Y., 1953. 985 loose-leaf pages, \$25.00.

This separate volume on therapy is a welcome and long needed addition to the loose-leaf *Oxford Medicine*. The owner of the *Oxford Medicine* should hereafter have prompt and authoritative information concerning new treatment with a reduction in the number of supplementary pages which he has to buy in order to keep his system up to date. The system can also become more useful for daily reference purposes and can emphasize an aspect of medicine in which it has not been outstanding: that is, modern and practical therapeutics.

The approach of the authors is somewhat surprising. They have purposefully avoided descriptions of more than one method of therapy. The methods described are often only those with which one or more of the authors has had personal experience. While this simplifies the treatment and gives it greater personal authority, it also limits the scope of the book. It must be noted that some of the recent one-volume books on therapeutics (Rehfuss, Conn, Kyser) contain a greater variety of treatment, more attractively presented.

* * *

DISEASES OF THE RETINA—Second Edition. Herman Elwyn, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. The Blakiston Company, Inc., New York, 1953. 713 pages, 243 illustrations, \$12.00.

In this, the second edition of Dr. Elwyn's book on "The Diseases of the Retina," several new chapters have been added and others revised. The increasing importance of retrolental fibroplasia in ophthalmology has been recognized and a chapter devoted to the subject; this has been included in the chapter on vascular malformations. Other new chapters have been added on ocular tuberculosis and sarcoidosis.

A revision of the chapter on diabetic retinopathy was necessitated by the work of Ballantyne and Loewenstein and Ashton and Friedenwald. The research of these scientists leading to the discovery and elucidation of capillary aneurysms in the retina in diabetes has done much to improve our understanding of diabetic retinopathy.

Due to changing concepts of essential hypertension the chapter dealing with this topic has been reconstructed.

With the publication of this second edition not only ophthalmologists but all physicians have a ready reference text on diseases of the retina.

SURGICAL PATHOLOGY. Peter A. Herbut, M.D., Professor of Pathology, Jefferson Medical College. Lea & Febiger, Philadelphia, 1954. 893 pages, 528 illustrations, \$14.00.

This book is an attempt to cover nearly all of the special fields of pathology useful to the surgeon in a concise form. As a result the presentation includes a large amount of detail without, however, providing enough on most subjects to satisfy a pathologist or anyone who desires full discussions. The presentation is almost entirely descriptive, without any effort to discuss pathogenesis or the functional significance of anatomical changes. There are, however, good bibliographies following all chapters.

The arrangement of subjects is on a regional basis, as is customary in presentations of pathology for surgeons. This, however, serves to minimize the consideration of fundamentals of pathology, and of interrelationships between pathological processes.

A few of the more than 500 illustrations are poor; several photomicrographs are not in sharp focus. The majority of the illustrations are satisfactory, however, and some are excellent.

This book should be useful as a source of simple anatomical facts concerning most diseases encountered by surgeons, and as a reference list for published articles of surgical interest in the field of pathology.

* * *

MOTHER AND BABY CARE IN PICTURES—4th Edition. Louise Zabriskie, R.N., Director, Maternity Consultation Service, New York City. J. B. Lippincott Company, Philadelphia, 1953. 244 pages, 255 figure numbers and 11 tables, \$3.00.

The illustrations in this book strike the reviewer as its most valuable asset. From them a parent may gain useful understanding and suggestions, and be stimulated to further reading and interest in the life and behavior of a baby and his mother. The illustrations in the chapters on Baby Clothes and Nursery Needs are particularly good, and show the types and choices of equipment available.

The text, while usually informative and accurate, will be considered by some to be too authoritarian and not sufficiently permissive of other ways or other ideas. It is admittedly difficult in a book of this sort to make statements which are sufficiently definite to be useful and at the same time not likely to produce conflict with other equally competent opinion. Nevertheless, it is true that there is often more than one way of accomplishing the desired end and this is at times lost sight of in the text. In addition, the wording of the text occasionally is such that an apprehensive mother might easily find new problems to worry about. "Nearly all diseases predispose the body to other and more serious diseases," for instance, is a sentence with an ominous note. The insertion of the word "may" would probably be a useful addition.

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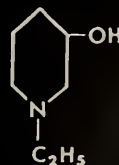
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Osteopaths Approve On-Campus Visits

The House of Delegates of the American Osteopathic Association, meeting in Toronto last July 15, approved on-campus visits of its schools by an A.M.A. committee to determine the quality of medical education provided.

This step dates back to the A.M.A. House of Delegates session in 1952 when a Committee for the Study of Relations Between Osteopathy and Medicine, headed by A.M.A. Past President John W. Cline, was created. As many doctors know, the committee has done a great deal of work since it was organized.

At the A.M.A. June meeting in San Francisco this year, the committee submitted "a progress report" to the Board of Trustees, which was later adopted by the House of Delegates.

The committee's three-page typewritten report said that "the justification or lack of justification of the 'cultist' appellation of modern osteopathic education could be settled with finality and to the satisfaction of most fair-minded individuals by direct on-campus observation and study of osteopathic schools. The committee, therefore, proposed to the Conference Committee of the American Osteopathic Association that it obtain permission for the Committee for the Study of Relations Between Osteopathy and Medicine to visit schools of osteopathy for this purpose."

Two other important paragraphs of the A.M.A.'s committee report said:

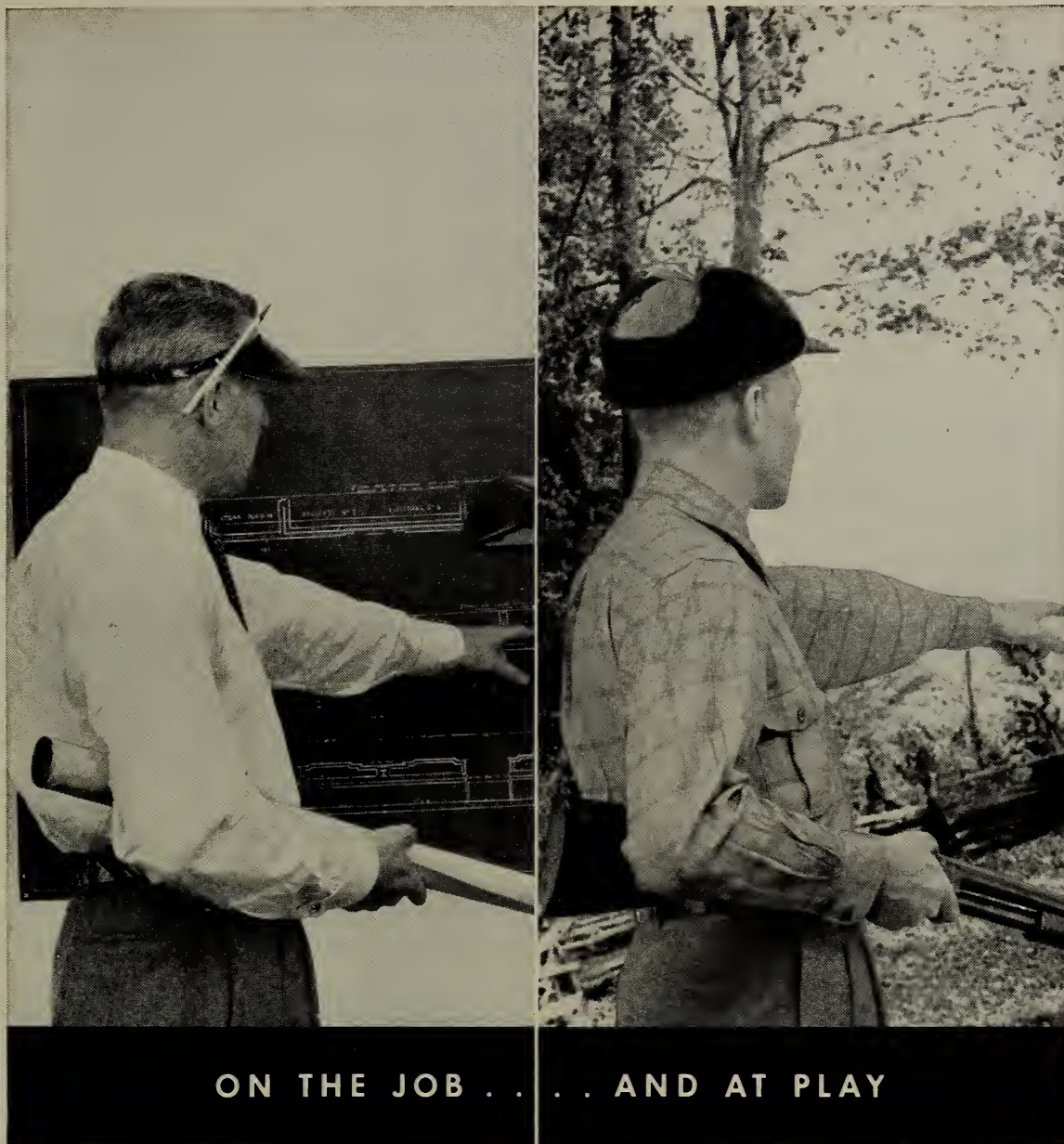
"It was agreed that each school would be visited by two members of the committee, accompanied by an individual of established experience in inspection of medical schools. The studies would be of sufficient duration, breadth and depth to establish the nature and scope of the educational program and determine the quality of medical education provided.

"The Conference Committee favorably recommended this proposal to the Board of Trustees of the American Osteopathic Association which considered it at a special meeting on February 6-7, 1954. It has referred the question to the House of Delegates which will act upon the proposal at its Toronto meeting in July. If the action of the House of Delegates of the American Osteopathic Association be favorable, the on-campus observation can be carried out in the fall of this year."

The action of the House of Delegates of the American Osteopathic Association was favorable. The Association issued a statement recently setting forth the action of its delegates. It is rather lengthy, but since it is so important to our study so far I quote it herewith in full:

"The House of Delegates of the American Osteopathic Association in session in Toronto, July 15, 1954, directed the Conference Committee to con-

(Continued on Page 60)



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Osteopaths Approve On-Campus Visits

(Continued from Page 56)

tinue in its deliberations with the committee for the Study of Relations Between Osteopathy and Medicine of the American Medical Association.

"In expressing its confidence in the four years' work of the A.O.A. Conference Committee, the House agreed that the committee should have the authority to negotiate with the A.M.A. committee on possible visitation by the latter of osteopathic colleges. The purpose of this visitation would be to observe the nature and scope of their education programs. This observational opportunity would be conducted entirely within limits agreed upon by the two commit-

tees. The immediate purpose of such on-campus visitations is to provide information to the A.M.A. committee to assist in its efforts to remove the cultist designation from the osteopathic profession.

"The House of Delegates of the A.O.A. in its approval of such visitations has established no new precedent, except that the proposed visitations would permit a private agency to determine for itself osteopathic educational programs and procedures. A much wider permission has long been afforded to official state examining agencies, granting agencies of the U. S. Department of Health, Education and Welfare, and other official groups, to visit osteopathic schools. If the A.O.A. Conference Committee

(Continued on Page 66)



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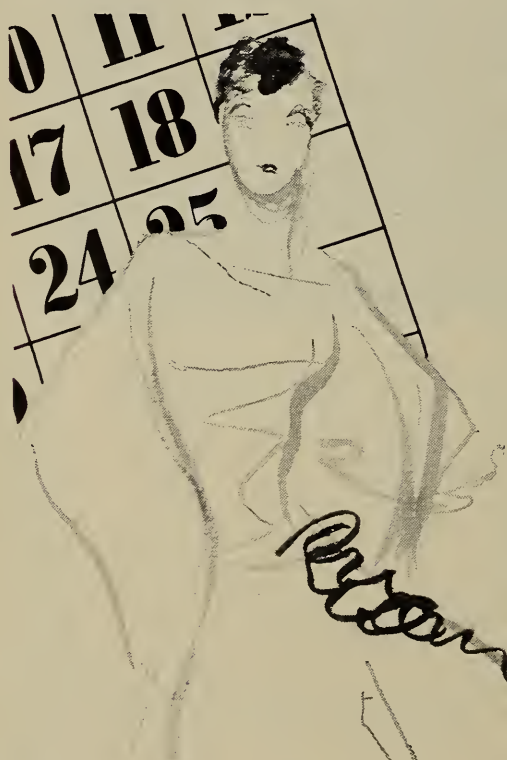
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Osteopaths Approve On-Campus Visits

(Continued from Page 60)

permits observation of osteopathic colleges by a private agency—it does so on the basis the American Osteopathic Association has long indicated its willingness to cooperate with the authorized group of any profession, 'wherever that cooperation may be expected to improve the health service offered the public.'

"Approval or accreditation of osteopathic colleges is entirely without the province of observational bodies and any visitations by the Committee on Relations Between Osteopathy and Medicine, if made, will be made purely for the purpose of afford-

ing a private agency an opportunity to inform itself about osteopathic educational programs.

"In commenting on this action, the newly elected president of the American Osteopathic Association, John W. Mulford, D.O., of Cincinnati, stated that the action was taken by the House of Delegates, 'with the complete confidence that neither the osteopathic profession nor the medical profession wishes to inflict its officialdom on the other.' He went on to say that the action of the A.O.A. House of Delegates could be considered as 'a logical outgrowth of the mutual respect which the two schools of healing hold for each other.'"

—The A.M.A. Secretary's Letter



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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236:536, 1948.
2. Douglas, H. S.: Western J. Surg. Obst. & Gynec. 59:238, 1951.
3. Cushny, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

Recurrent Tuberculous Meningitis Can Now Be Cured

Recurrences of tuberculous meningitis—one of the most difficult forms of meningitis to treat—no longer mean that recovery is hopeless.

There is even a possibility that recurrences need not prevent pregnancy, three physicians stated in a recent issue of the *Journal of the American Medical Association*.

They reported on "what appears to be one of the most prolonged instances of treatment with complete recovery from the disease since the introduction of streptomycin."

The patient, 15 years old when first admitted to the Cook County Hospital in Chicago, recovered, and later bore three "robust, healthy children." For two years since her third child was born, she has been free of any symptoms of the tuberculous condition, and has successfully recovered from attacks of syphilis and jaundice.

The disease, a common form of meningitis in which the membrane enclosing the brain and spinal column becomes inflamed, sometimes leaves an apparently-recovered patient subnormal mentally, or with paralysis. The Cook County Hospital patient was treated for several recurrences between October

(Continued on Page 72)

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*Randall, H. T., Habif, D. F., Lockwood, J. S., and Warner, S. C.:
Potassium Deficiency in Surgical Patients, *Surgery* 26 341 (Sept.) 1949

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Recurrent Tuberculous Meningitis Can Now Be Cured

(Continued from Page 67)

1947 and September 1948. Frequent check-ups since then have shown her to be in good health.

"Among the commoner forms of meningeal infection, tuberculous meningitis continues to be the most resistant to modern treatment," the physicians said. "Even for those patients who survive the early stages of the disease, there can be no assurance that a complete recovery will be accomplished. If treatment is discontinued too soon a relapse may occur."

This case shows "that recurrences do not neces-

sarily mean that recovery is hopeless—they only mean that treatment should again be instituted most vigorously," the physicians said.

It also shows that the disease can be cured without resorting to the old method of injecting medication into the spinal canal, they said. The Cook County Hospital patient was given intramuscular injections of streptomycin.

Finally, the case "strongly suggests" that healed tuberculous meningitis need not prevent pregnancy, they said. The report was made by Drs. Archibald L. Hoyne and Allen Schultz, Chicago, and Dr. Jerome H. Diamond, now of South San Francisco.



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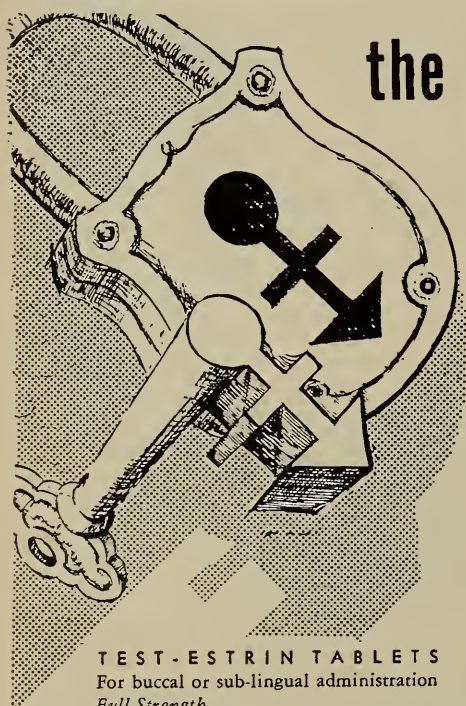
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Million Dollars Contributed for Medical Education

More than a million dollars in contributions by American physicians during 1953 have been turned over to the National Fund for Medical Education to ease the financial plight of the nation's medical schools.

Dr. Edward L. Turner, Chicago, secretary-treasurer of the American Medical Education Foundation, announced recently that a check for \$1,101,578.31 has been given to the national fund. This includes a \$500,000 grant by the American Medical Association Board of Trustees.

Doctor Turner said "the contributions sent in by doctors throughout the nation is an example of outstanding service in aiding humanity through medicine.

"The 79 great institutions of medical learning now graduate more than 6,000 doctors each year. In providing the proper instruction for these young men, our medical schools have an annual financial need of approximately \$10 million in addition to their

normal budgets. American doctors have come to the aid of these schools with their contributions through the American Medical Education Foundation.

"Evidence of the doctors' interest in supporting the schools rather than relying on federal subsidy is demonstrated by the marked increase in the number of contributors during the past three years.

"In 1951, the first year of the American Medical Education Foundation, 1,876 doctors contributed to the fund. In 1952, there were 7,259 contributors and the list skyrocketed to 18,159 during 1953."

Since 1951, the American Medical Education Foundation has received \$3,563,883.09 as gifts from doctors to support the medical schools. The American Medical Association has made grants of \$2,000,000 of this sum.

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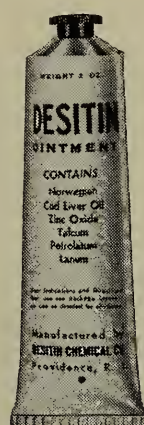


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1. Grayzel, H. G., Helmer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
2. Helmer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
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Older Persons Shouldn't Be Overprotected

"Babying" elderly persons until they feel useless and unwanted may be a good way to hasten them to the grave, a Pittsburgh physician said recently.

The aged should be helped to retain their dignity and pride instead of giving up, Dr. Marc H. Hollender and collaborating writer Stanley A. Frankel said in a recent issue of *Today's Health* magazine, published by the American Medical Association.

"It is as unwise to overprotect our aged parents as to overindulge our children," they said. "Overprotection makes older people feel you deprecate them, regard them as incompetent, incapable or inferior."

They told of the 83-year-old father of a millionaire who went to work pressing pants, to the embarrassment of his son, who "completely missed the point." The father's work was "probably the one thing that kept him relatively healthy and happy. Permanent retirement to Florida, to seclusion, to peace and quiet might mean only emotional problems, perhaps more rapidly failing health and an earlier grave."

Overprotection can injure the pride of the old person and make him "a permanent, hopeless dependent" instead of someone who might otherwise "put in years of worthwhile service to society." Dependency may mean despondency, irritableness and a "dictatorial" attitude. In other cases, overprotective-

ness causes some to give up trying. They drop back into a state of vegetating instead of actively living.

"Much has been written recently about the undesirability of industry setting up arbitrary retirement ages of 60 or 65," they said. "It has been proved that some men are still active and vigorous at 70 while others are through at 50. Whenever you automatically retire someone when he has reached a certain chronological age, you may well condemn that man to an earlier grave, and to an unhappy last few years.

"The latest plans are to retire a man to something rather than from something," giving him a lighter or part-time job. "If business blue-prints a gradual and never-complete retirement for the aging worker, the sons and daughters should go along with it.

"If the old gentleman (or lady) wants to keep going, it's likely father still knows best. Sometimes the well-meaning impetuosity of youth must bow to the distilled wisdom of age," they said.

Poliomyelitis totals for 1954 continue below those for 1953: from July 25-31, reported cases totaled 1,484, about 8 per cent less than the 1,626 figure for corresponding weeks of both last year and the 1949-1953 median. The 1954 week's figure, however, was 28 per cent above the July 18-24, 1954, total. The Public Health Service calls the increase normal for this time of year.

—A.M.A. Washington Letter

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Personal communication (Apr. 12, 1950)

1951 Of 119 patients treated with Azulfidine prior to 1944, 90 patients (75%) were symptom-free or considerably improved when re-examined in 1949.

Svartz, N.: *Acta. Med. Scandinav.* 141:172, 1951.

1952 In a series of 52 patients with chronic ulcerative colitis 30, or 58%, showed significant improvement after treatment with Azulfidine.

Morrison, L. M.: *Gastroenterology* 21:133, 1952.

1953 *Morrison* says: "Azopyrine [Azulfidine] . . . has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."

Morrison, L. M.: *Rev. Gastroenterology* 20:744 (Oct.) 1953.

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Adults Can Lick Rheumatic Fever

Most persons can resume normal lives if the first attack of rheumatic fever comes in adulthood rather than childhood, a study of 98 World War II veterans shows.

Three California physicians recently stated in the *Journal of the American Medical Association* that adult rheumatic fever patients should receive encouragement toward social adjustment in addition to treatment for physical recovery.

"It would appear that, in addition to extensive rehabilitation, attempts should be made at the time of illness to encourage optimism in patients and avoid overemphasis of any possible or expected disability," they said.

Among the 98 studied by the three California doctors, most made "adequate adjustments in regard to education, jobs, marriage and family life, and recreational activities." The worst adjustments were made by those who were pessimistic about the illness.

Only 18.4 per cent of the veterans who had an initial attack of rheumatic fever during military service showed any residual heart disease, the physicians said. The vast majority of them were able to resume normal lives.

"Ninety-five per cent were gainfully employed or in school at the time of the follow-up study," they said. "No instance of serious disability . . . was observed."

Compared to a 10 to 20 per cent fatality rate among children in the first five years after rheumatic fever, the rate was only 1.7 per cent among veterans, according to the National Research Council.

The study was made by Drs. Ephraim P. Engleman, Leo E. Hollister, and Felix O. Kolb, San Francisco.

DR. HOWARD RUSK, New York, in a lecture before the American Academy of General Practice: "Sick people ask their God, 'why must I suffer?' Possibly the answer is in the work of the potter. Fine ceramic pieces are not made by setting clay out in the sun. They come only from the white heat of the kiln. In the firing process some pieces are broken, but those that survive the heat are transformed from dull clay into objects of priceless beauty. And so it is with the sick, suffering, and crippled people. Those who, through medical skill, opportunity, work and courage, survive their illness or overcome their handicap, take their places back in the world with a depth of spirit which we can hardly measure."

—The A.M.A. Secretary's Letter

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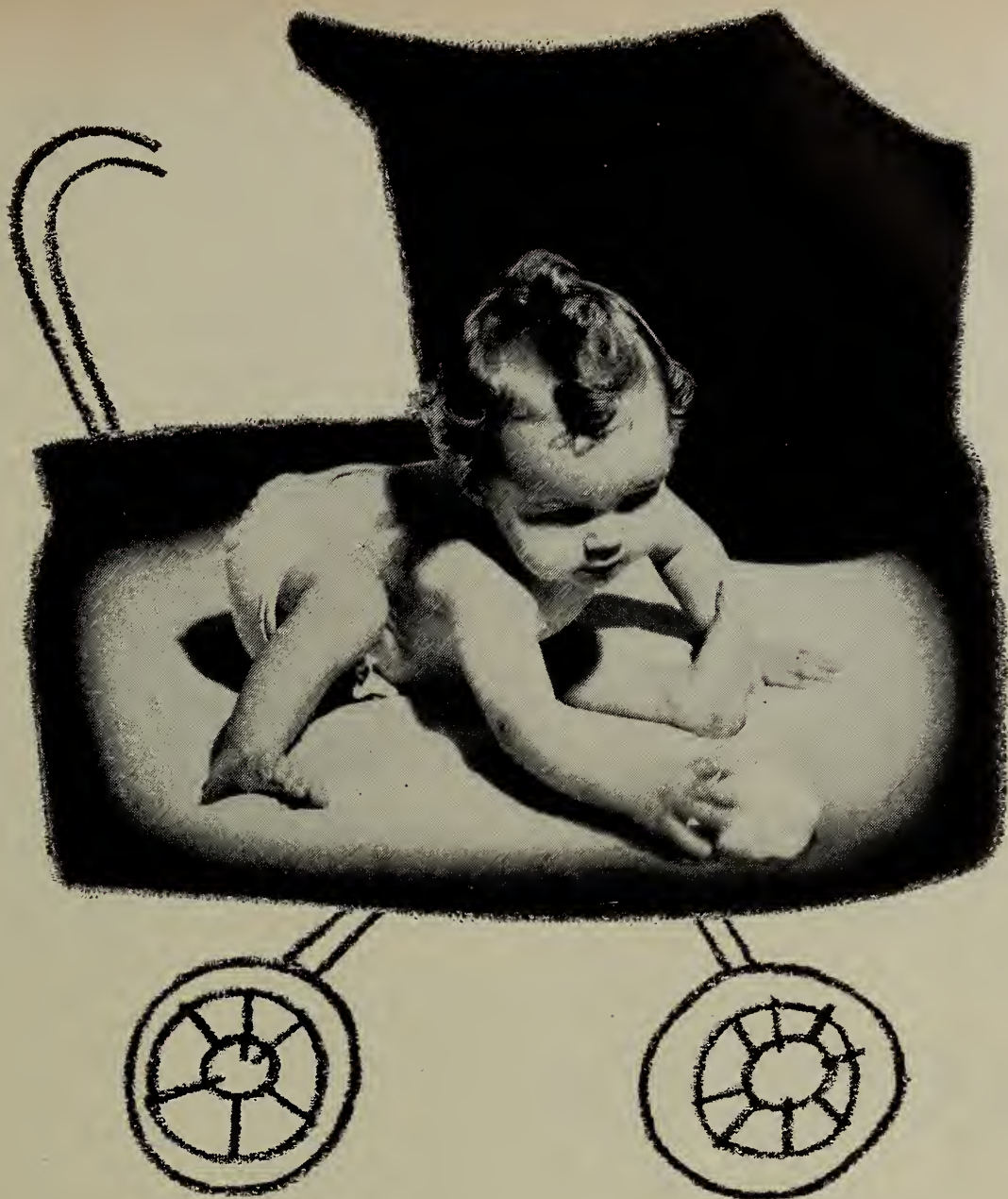
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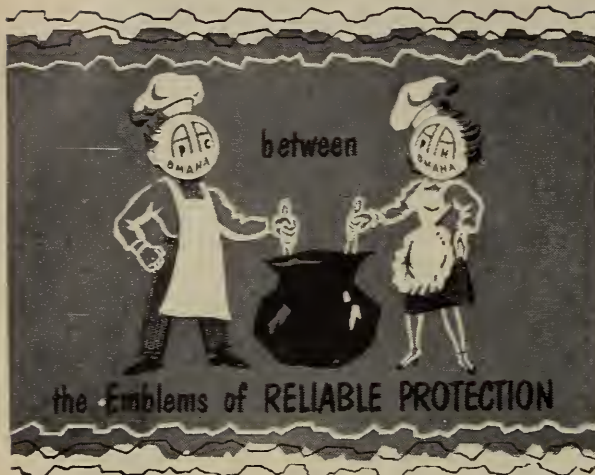
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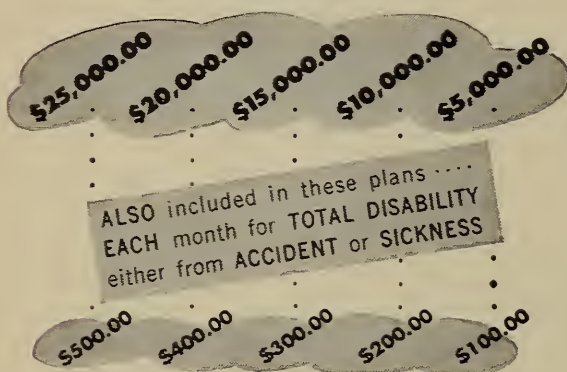
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Heart "Kick" Measured by Unusual Instrument

Anyone standing still on a well-balanced bathroom scale and watching the pointer quiver is seeing the "kick" of his heart—a phenomenon which is expected to provide important information about heart conditions.

A 20-year study of this phenomenon was reported in a recent issue of the *Journal of the American Medical Association* by Dr. Isaac Starr, of the University of Pennsylvania Department of Therapeutic Research, Philadelphia.

"When one fires a gun, the recoil kicks him in the shoulder, and the bigger the powder charge, the greater the kick and the greater the impact of the bullet," he said.

Roughly, the heart works the same way, and its "kick" as it pushes the blood through the circulatory system is what makes the pointer of the scale wobble. Ballistics experts study the impact of the gun's firing mechanism on the bullet. The heart-testing instrument—called the ballistocardiograph—uses this principle to study the movement of the body produced by the "kick" of the heart. By measuring the strength or weakness of the heartbeat, the instrument can provide valuable clues which could not be learned from previous heart-testing methods, Dr. Starr said.

The heart's kick is so sensitive that even holding the breath can produce readable changes on the ballistocardiograph, and studies of the recorded changes can "give greater meaning to the heart's behavior." For instance, the ballistocardiogram shows an "objective demonstration" of such vague disorders as cardiac fatigue, diminished cardiac reserve, weakness of the heart muscles, and heart failure. In a few cases it may provide a more encouraging diagnosis—as for a rheumatic fever patient whose test shows normal function of the heart muscle in spite of injury to the vessels.

Smoking produces such reactions on the record in certain diseases that the instrument may be used to identify persons with a particular type of disorder that readily reacts to tobacco. Dr. Starr said tests indicate that eliminating tobacco might be as beneficial to some other types of heart disease patients as for those with peripheral vascular disease, who usually are advised to quit smoking.

Experimentally, the instrument can test the capacity and limitation of new drugs in their effects on the heart. Responses of the circulatory system in many other diseases may give much badly-needed information about them, Dr. Starr said.

The first instrument used by Dr. Starr in 1936 was a flat table on which the patients could move only lengthwise, a strong spring to oppose this motion, a light beam to measure the heart's "kick" against the spring, and an apparatus to photograph the magnified light beam. This was a long way from

(Continued on Page 96)

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J. B. Lippincott, p. 243, 1953.

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Med. Times 81:266 (Apr.) 1953.

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Delaware State M. J. 22:283 (Oct.) 1950.

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Heart "Kick" Measured by Unusual Instrument

(Continued from Page 92)

the original instrument: a bed hung from the ceiling in 1877 by the physician who first noticed the quiver on his scales. Some models now use electric recording devices. The resulting record is a series of waves and peaks like those produced by the lie detector.

An expert eye is needed to read these waves, since even movements in the building may affect them. "A trolley passing on the street below puts a fine vibration into my records, although my laboratory is on the eighth floor," Dr. Starr said. He has tested hundreds of patients since 1936 and followed many of their cases for more than 15 years. He also has used the ballistocardiograph to measure experimental changes produced on normal persons, in order to understand the progress of common abnormalities.

He has found that healthy young adults always show normal records. Age and heart disease produce abnormal wave lines, even in some cases where the

patient is apparently healthy; while some patients with diagnosed heart disease show normal records.

"When the heart disease is believed to be severe by ordinary clinical criteria, the ballistocardiogram is usually abnormal," he said. "The exceptions, of course, are of the greatest interest, for it is beginning to appear that the clinicians' impression of the strength of the heart, based on the indirect methods in the past, though probably right in the majority of cases, was often conspicuously wrong."

The instrument is designed to make "readily available" information about this basic question of heart strength. It also may test what situations are good or bad for a patient whose heart is suspected of being abnormal, and indicate which treatment has the best effect. The family physician using the instrument, with his close knowledge of the patient and opportunity to study him carefully, "will find himself in an unusually favorable position to provide us with decisive information on many matters of great importance to the patient," Dr. Starr said.



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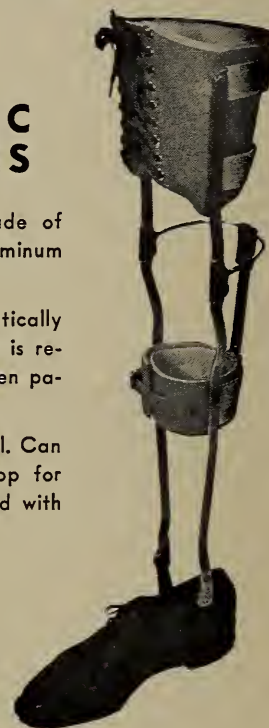
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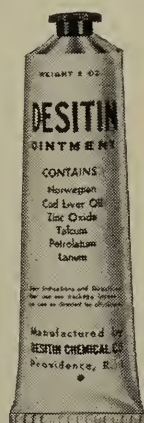


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2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
3. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surgery. 18:512, 1949.
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ROSTER OF COUNTY MEDICAL SOCIETIES, CALIFORNIA MEDICAL ASSOCIATION

(County society secretaries are requested to notify California Medicine promptly when changes are indicated in their roster information.)

Alameda-Contra Costa Medical Assn., 6230 Claremont Avenue, Oakland 18. Meets Third Monday, 8:15 p.m., Hunter Hall, Oakland.
Pres., James B. Graeser, 298 Grand Ave., Oakland.
Secy., Bernard B. Gadwood, 2815 MacDonald Ave., Richmond.

Butte-Glenn Medical Society. Meets Fourth Thursday.
Pres., Thomas Elmendorf, Masonic Bldg., Wil-lows.
Secy., Karl J. Chiapella, 184 E. 5th St., Chico.

Fresno County Medical Society, 616 Security Bank Building, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside Country Club.
Pres., Fred E. Cooley, 4313 E. Tulare St., Fresno.
Secy., J. Cooper Collins, 2920 Fresno St., Fresno.

Humboldt County Medical Society. Meets First Thursday.
Pres., Clarence Crane, Jr., 492 Main St., Ferndale.
Secy., Ted W. Loring, 715 I St., Eureka.

Imperial County Medical Society. Meets Second Tuesday, 8 p.m., Pioneer Memorial Hos-pital, Brawley.
Pres., Sidney M. Tepper, 136 N. 5th St., El Centro.
Secy., Ernest Brock, 200 S. Imperial Ave., Im-perial.

Inya-Mana County Medical Society. Meets Fourth Tuesday except December, January, February.
Pres., Victor H. Hough, Lone Pine.
Secy., Robert W. Denton, 611 W. Line, Bishop.

Kern County Medical Society, 1300 Chester Avenue, Bakersfield. Meets Third Tuesday, 7:30 p.m., Stockdale Country Club except June, July, August.
Pres., L. N. Osell, 2011 18th St., Bakersfield.
Secy., R. W. Burnett, 515 Truxtun Ave., Bakers-field.

Kings County Medical Society. Meets Second Monday, 8:00 p.m., Legion Hall, Hanford.
Pres., Lloyd Christensen, Van Sicklen Bldg., Hanford.
Secy., R. F. Sorensen, Van Sicklen Bldg., Han-ford.

Lassen-Plumas-Modoc County Medical Soci-ety. Meets on call.
Pres., R. M. Peters, Portola.
Secy., Charles W. Brown, Western Pacific Hos-pital, Portola.

Los Angeles County Medical Assn., 1925 Wil-shire Blvd., Los Angeles 57. Meets First and Third Thursdays, 1925 Wilshire Blvd., Los An-geles.
Pres., J. Philip Sampson, 2200 Santa Monica Blvd., Santa Monica.

Secy., Ewing L. Turner, 1930 Wilshire Blvd., Los Angeles 57.

Madera County Medical Society.
Pres., Omar U. Need, 117 S. B St., Madera.
Secy., Gordon C. Hall, 501 E. Yosemite, Ma-dera.

Marin County Medical Society. Meets Meadow Club of Tamalpais, Fourth Thursday of every month, 7:00 p.m.
Pres., Leo L. Stanley, 1322 5th Ave., San Ra-fael.
Secy., Wm. Burgett Smith, 711 D St., San Ra-fael.

Mendocino-Lake County Medical Society.
Pres., Olga A. Miller, Box X, Talmage.
Secy., Martin S. Barnes, 615 Main, Fort Bragg.

Merced County Medical Society. Meets Fourth Thursday, Hotel Tioga, Merced.
Pres., William Fountain, Shaffer Bldg., Merced.
Secy., John East, 652 W. 20th Street, Merced.

Monterey County Medical Society. Meets First Thursday.
Pres., A. C. Mitchell, 576 Hartnell, Monterey.
Secy., Clyn Smith, Jr., Cass and Carmelita, Monterey.

Napa County Medical Society. Meets Second Wednesday.
Pres., Harold E. James, Sanitarium, Calif.
Secy., Merle F. Godfrey, 1519 Jefferson, Napa.

Orange County Medical Association, 1226 N. Broadway, Santa Ana. Meets First Tuesday, 7:00 p.m.
Pres., A. Norton Donaldson, 1330 N. Main St., Santa Ana.
Secy., Chad M. Harwood, 1202 N. Broadway, Santa Ana.

Placer-Nevada-Sierra County Medical Society. Meets every second Wednesday of each month.
Pres., John R. Topic, 1166 High St., Auburn.
Secy., T. J. Rossitto, 1166 High St., Auburn.

Riverside County Medical Association, 4241 Market Street, Riverside. Meets Second Mon-day, 8:00 p.m., El Loro Room, Mission Inn.
Pres., Van R. Hamilton, 6876 Magnolia, River-side.
Secy., Vean M. Stone, 3616 Main St., Riverside.

Sacramento Society for Medical Improve-ment, 2731 Capitol Ave., Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.
Pres., A. E. Berman, 2901 Capitol Ave., Sacra-mento.
Secy., Frank G. Schiro, 815 30th St., Sacra-mento.

San Benito County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.
Pres., E. C. Sheldon, 956 San Benito St., Hol-lister.
Secy., Peter Jones, Bank of America Bldg., Hollister.

San Bernardino County Medical Society. Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.
Pres., Leonard M. Taylor, 3549 Valencia Ave., San Bernardino.
Secy., Carl M. Hadley, 315 Platt Bldg., San Bernardino.

San Diego County Medical Society, 101 Med-ical-Dental Bldg., San Diego 1. Meets Sec-ond Tuesday, Manor Hotel.
Pres., Howard A. Ball, 307 Medico-Dental Bldg., 233 A St., San Diego 1.
Secy., Maurice J. Brown, 2001 Fourth Ave., San Diego 1.

San Francisco Medical Society, 2180 Washing-ton St., San Francisco 9. Meets Second Tuesday, 8:15 p.m., 2180 Washington St., San Francisco 9.
Pres., Samuel R. Sherman, 2107 Van Ness Ave., San Francisco.
Secy., Matthew N. Hosmer, 384 Post St., San Francisco.

San Jacquin County Medical Society. Meets First Thursday, 8:15 p.m., 936 N. Commerce St., Stockton.
Pres., James Baker, 845 N. California St., Stockton 3.
Secy., F. A. McGuire, 307 Medico-Dental Bldg., Stockton.

San Luis Obispo County Medical Society. Meets Third Saturday, 7:00 p.m., Golden Dragon Cafe, San Luis Obispo.
Pres., Ernest Werbel, 1170 Marsh St., San Luis Obispo.
Secy., Tibor Beresky, 1304 Garden St., San Luis Obispo.

San Mateo County Medical Society, 122 Sec-ond Ave., San Mateo. Meets Third Tuesday of each month.
Pres., Bradley C. Brownson, 23 Baldwin Ave., San Mateo.
Secy., Norman C. Fox, 512 Jenevein Ave., San Bruno.

Santa Barbara County Medical Society, 300 West Pueblo St., Santa Barbara. Meets Sec-ond Monday, Cottage Hospital.
Pres., Laurence E. Heiges, 202 E. Cypress, Lompoc.
Secy., Arthur E. Wentz, 300 W. Puebla, Santa Barbara.

Santa Clara County Medical Society, 1024 The Alameda, San Jose 26. Meets Third Manday of every month.
Pres., Burt L. Davis, 261 Hamilton Ave., Pala Alto.
Secy., Dan Brodovsky, St. Claire Bldg., San Jose.

Santa Cruz County Medical Society. Meets every Second month, Second Tuesday. Time, place to be announced.
Pres., D. S. Sedgwick, Capitola.
Secy., Samuel B. Randall, 230 Walnut Ave., Santa Cruz.

Shasta County Medical Society. Meets First Monday.
Pres., H. Harper Thorpe, 1529 Market St., Redding.
Secy., Roy W. Thomas, 1555 Court St., Red-ding.

Siskiyou County Medical Society. Meets Sun-day on call.
Pres., Albert A. Newton, 807 S. Main, Yreka.
Secy., Victor J. Thompson, Weed Hospital, Weed.

Salana County Medical Society. Meets Second Tuesday, 8:00 p.m., Casa de Valleja Hotel, Vallejo.
Pres., Herbert L. Joseph, 607 Carolina, Valleja.
Secy., Robert L. Garrett, 327 Georgia, Valleja.

Sonoma County Medical Society, 300 Amer-ican Trust Bldg., Santa Rosa. Meets Second Thursday.
Pres., William J. Rudee, 1049 Fourth St., Santa Rosa.
Secy., Frank E. Lones, 300 American Trust Bldg., Santa Rosa.

Stanislaus County Medical Society. Meets Third Thursday, 7 p.m., Hotel Hughson, Mo-desto.
Pres., Howard F. Nachtman, 222 McHenry Ave., Modesto.
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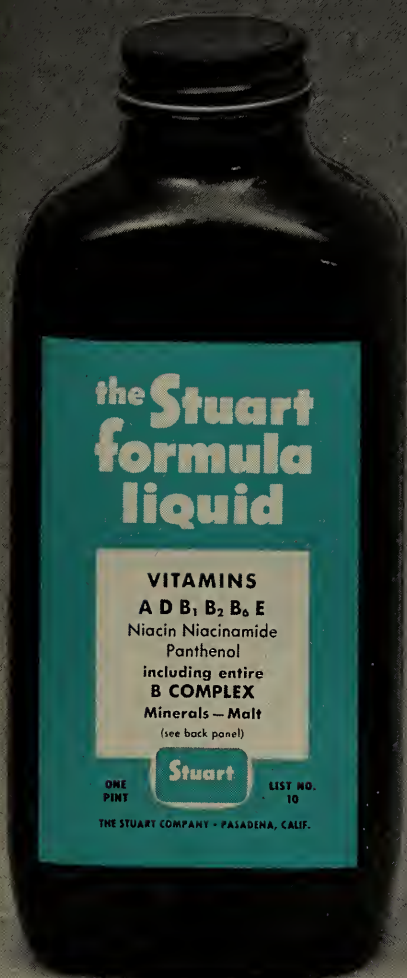
Ventura County Medical Society. Meets Second Tuesday, 7:15 p.m., Colonial House, Oxnard.
Pres., James H. Nelson, 326 Topa Topa Dr., Ojai.
Secy., Franklin K. Helbling, 34 N. Ash St., Ventura.

Yola County Medical Society. Meets First Wed-nesday.
Pres., John A. Saltsman, 312 Elizabeth St., Vacaville.
Secy., William T. Robinson, Woodland Clinic, Woodland.

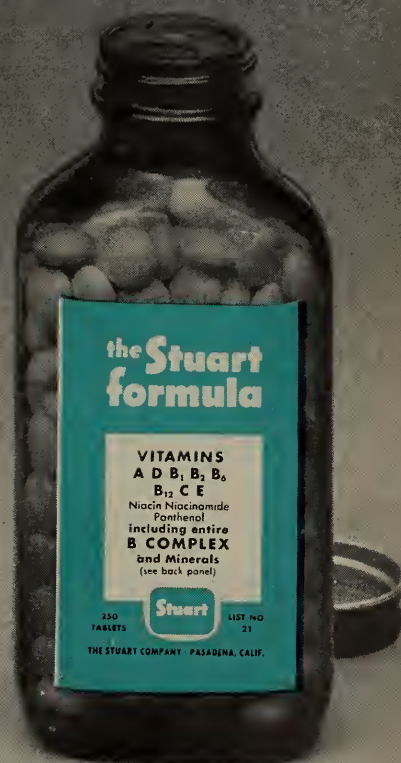
Yuba-Sutter-Calusa County Medical Society. Meets Second Tuesday.
Pres., Paul C. Cress, 605 4th St., Marysville.
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Tonsillectomy Affects Severity of Polio

A polio victim who has had his tonsils removed is about four times more likely to have the serious bulbar type of polio than a patient who still has tonsils.

This finding, reported in a recent issue of the *Journal of the American Medical Association*, was made after a study of more than 2,000 victims of a 1946 polio outbreak in Minnesota.

Gaylord W. Anderson, M.D., and Jeanne L. Rondeau, A.B., of the University of Minnesota School of Public Health, said their study did not show that persons without tonsils are more likely to get polio. However, if "recognizable" polio does occur, the patient without tonsils is in more danger of having the bulbar type. Aside from the first month after operation, when bulbar incidence is lower than in later months, it makes no difference how long before the polio attack the tonsillectomy was performed, they said.

Bulbar involvement occurs in over a third of the patients whose tonsils are not present at the time of the polio attack. Less than a tenth of the patients who have not had tonsillectomy show the bulbar type, which affects the gray matter in part of the brain, resulting in impairment of breathing and often requiring use of the iron lung.

There is much evidence that polio virus is so widespread that almost everyone is exposed to it, the *Journal* article said. But only a small number respond badly to the virus, with resultant paralysis.

The proportion of persons who respond with the bulbar type supposedly has increased in recent years and is greater in the older age groups. The article said the probable reason is that higher polio incidence has shifted into the age more likely already to have had tonsillectomies, and that the frequency of tonsillectomies has increased.

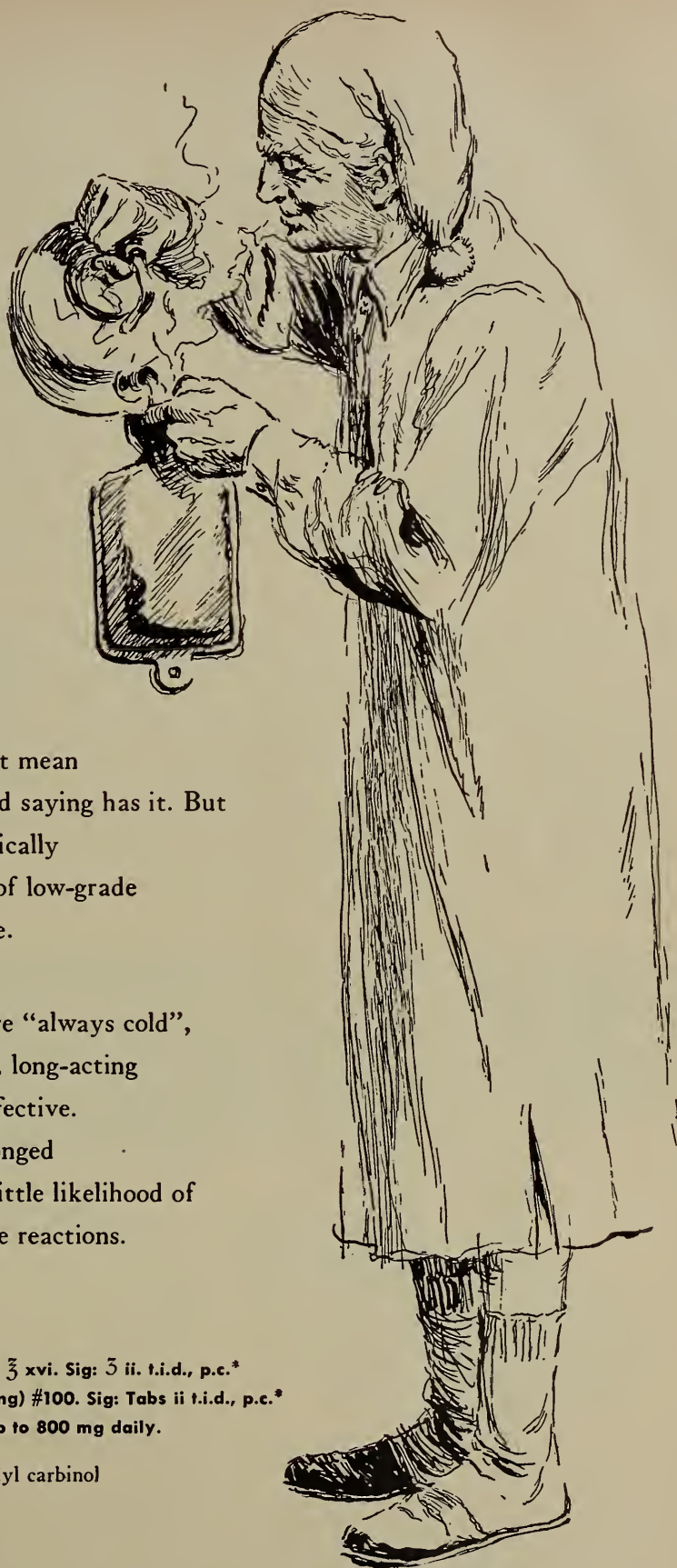
The lack of cases of bulbar type polio in certain areas may be due to the concentration of polio in ages before tonsil removal, they said. Certain countries, such as Egypt, Chile, and Japan, have almost no bulbar polio, probably because of the almost complete absence of tonsillectomies at ages when polio is likely to strike.

The Minnesota study, aided by a grant from the National Foundation for Infantile Paralysis, was based on 2,669 case histories. It showed that 71.4 per cent of the 535 persons with bulbar polio had undergone tonsillectomies as contrasted with 28.2 per cent of the 936 with severe spinal polio; 32.6 per cent of the 908 with mild spinal, and 34.8 per cent of the 290 nonparalytic cases.

"Even more significant than the absolute difference between the bulbar and other groups is the fact that this difference holds at all ages and in both sexes," they said.

If "recognizable" polio developed in a child who still had tonsils, the chances were one out of 12 that

(Continued on Page 16)



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Tonsillectomy Affects Severity of Polio

(Continued from Page 10)

the infection would be bulbar, but, if the child had at some time had his tonsils removed, the chances were more than one in three, they said.

"The magnitude of this effect is quite apparent" when the actual number of bulbar cases is compared with the number that might have been expected if none of the patients had had tonsillectomies, they said. Among the 694 patients who had not had tonsillectomies before the age of 4, only 59 bulbar cases developed, or 8.5 per cent.

"If the 81 patients who had had tonsillectomy, in this age group, had had the same rate of bulbar involvement, there would have been only 6.9 bulbar cases," they said. "Actually there were 21, or an excess of 14.1 cases attributable to the higher bulbar rate in those who had had tonsillectomy.

"It is found that there were 273 more bulbar cases

in the entire group than might have been expected if all had had the same rate of bulbar involvement as did the group of patients who had not had tonsillectomy."

They said it is probable that tonsillectomy removes some "natural barrier" which would have prevented the spread of polio virus from the throat to the nerve centers. However, their study did not answer the question of how bulbar polio develops, or whether a person without tonsils is more likely to get any kind of polio.

"Evidence is available to indicate that several factors such as recent tonsillectomy, pregnancy, excessive fatigue, and recent injections" of certain kinds may "tip the scales" toward susceptibility, they said.

"No inference is to be drawn as to the desirability of tonsil removal," they said, but only "a suggestion of the importance of suitable indication for removal before operation is undertaken."

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American Prisoners of War May Still Have Odd Disease

Approximately 2,000 Americans are believed to have been affected by a snail-carried disease during World War II and were never treated.

Two Coral Gables, Fla., physicians reported in a recent issue of the *Journal of the American Medical Association* on one case discovered in a former Japanese prisoner-of-war. They said the discovery of the disease after 10 years stresses "the importance of looking for the disease in similar persons."

Schistosomiasis, also known as katayama disease, is not native to the United States and presents no public health problem here. However, about 1,500 cases were diagnosed and treated during the Leyte campaign and thousands more may have occurred without being found. It was prevalent among prisoners-of-war in the Philippines.

The disease results in thickening of the intestinal

wall, cirrhosis of the liver with its complications, and urinary bladder disease.

The disease attacks man through free-swimming larvae developed in snails. The larvae burrow into the skin, usually during swimming or bathing.

The former prisoner-of-war treated by Drs. John L. Wolford and John M. Rumball had been interned at Mindanao for two years, during which time he labored in rice paddies from sunup to sundown. These areas are known to be infested with schistosome larvae.

The physicians pointed out that symptoms of the disease may go unnoticed and it is difficult to diagnose. They said it should be considered in any person who has been in the infested area and who has vague complaints or an enlarged liver, since early treatment can prevent further damage.



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1. Buxton, C. L., and Vann, F. H.: *New England J. Med.* 236:536, 1948.
2. Douglas, H. S.: *Western J. Surg. Obst. & Gynec.* 59:238, 1951.
3. Cushny, A. R.: *Textbook of Pharmacology and Therapeutics*, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.



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500 and 1000.

Homeless Men Probably Spread Much TB

The homeless men of "Skid Row" quite probably are a major source for the spread of tuberculosis in the United States, a Minneapolis survey shows.

An 11-month study of the client population of the Minneapolis Salvation Army Men's Social Service Center showed the rate of new cases of tuberculosis was 55 times as great as the rate in the city's general population during the same period.

The survey was reported in a recent issue of the *Journal of the American Medical Association* by Dr. Herbert W. Jones, Jr., medical director of the service center; Jean Roberts, Minneapolis director of pub-

lic health records and statistics, and John Brantner, clinical director of the Center.

Most of the men studied came to the Center voluntarily from Skid Row. About 70 per cent of them said "the abusive use of alcohol" was their major problem. Only 30 per cent were residents of Minneapolis, and 20 per cent residents of Minnesota. Fifty per cent had no established residence in any state.

The high rate of tuberculosis occurred in a highly mobile group living under conditions likely to foster infection of others in the same group, the writers said.

"The men in this group generally sleep in dormi-

(Continued on Page 32)



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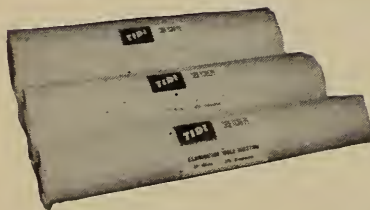
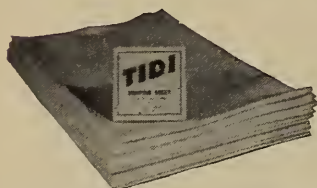


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Body Armor Recommended For Civilian Use

The eight-pound nylon body armor first tested in Korea should be considered for civilian use, Army officers recently declared.

Field trials showed the armor was most effective in protecting against chest and abdominal wounds, particularly when the bullet or shell fragment hit at an angle or was of low velocity, they said. Thus it would be effective during an attack on cities, when injuries from flying debris are frequent.

"The battlefield is no longer confined, and the specter of atom-bomb or H-bomb blasts on homeland cities is an accepted prospect," they said. "Injury from flying debris, such as masonry, metal, glass, etc., is of great importance after such a blast, and conceivably the use of body armor could lessen appreciably the staggering morbidity and mortality anticipated in such a mass civilian disaster."

The medical effectiveness of the body armor was described in a recent issue of the *Journal of the American Medical Association* by Lt. Col. R. H. Holmes, Maj. W. F. Enos, Jr., and Capt. J. C. Beyer, of the Armed Forces Institute of Pathology, Washington.

Major findings in research leading to development of the vest were that 75 per cent of all wounds are caused by shell fragments, that about 30 per cent of all wounds were in the chest or abdomen, and that most missiles were of low enough velocity to be protected against.

Actual field trial in Korea showed that a lightweight vest could be worn without interfering with combat, that soldiers "unanimously" desired it, and that it boosted morale and increased "aggressiveness."

Tests in 1951 and 1952 showed the armor brought

about a relative increase in the percentage of head and neck wounds and severe wounds of extremities. This was because soldiers suffering multiple wounds, one or more of which would have been fatal in the chest or abdomen, were protected enough to allow them to reach hospitals despite severe wounds. Otherwise these men would not have been likely to survive. Combat surgeons also noted that the severity of abdominal wounds had decreased.

"This increase in survival time actually leads to an additional reduction in the number of men killed in action, because of advanced techniques in battlefield recovery and helicopter evacuation," they said. Once at a hospital, modern care gives the man a 98 per cent chance of survival.

The armor provided "a high degree of protection against shell fragments and some degree of protection against small arms fire, depending on the angle of incidence of the bullet and the range," they said. "Bullets hitting at acute angles and/or reduced velocities occurring at the terminus of flight are frequently defeated by the vests. In other instances, the severity of wounds is significantly reduced, even though the vest is perforated.

"Classification forbids detailed discussion, but it can be stated that in a statistically significant number of instances 68 per cent of all missile hits on armored vests worn in actual combat were defeated. Because of the probability of multiple wounds, this does not necessarily mean that a casualty or fatality was prevented, but it does mean that there was an absolute reduction in the number of wounds, any of which conceivably could have been fatal or disabling. Since about one-third of all who sustain thoracic and abdominal wounds are wounded in these anatomic regions alone, it follows that there is also an actual reduction in total casualty incidence."

Hemiplegic Amputee Can Learn To Walk

A child with both legs amputated and one side of his body paralyzed learned to walk and even climb stairs, four New York City doctors recently stated.

The child's illness, coupled with many complications, was so acute that he suffered loss of speech and could barely move one hand. Despite these complications, after three years of treatment he "could walk unsupported with a fair gait and was almost independent in activities of daily living."

This case and the rehabilitation of two other hemiplegic amputees was described in a recent issue of the *Journal of the American Medical Association* by Drs. Abraham O. Posniak, Charles Long, Michael M. Dacso, and Howard A. Rusk.

They said although the amputee who also suffers paralysis is doubly handicapped, walking with an artificial leg is possible if the patient has a strong enough desire plus the cooperation and love of his family. In fact, in certain cases it is "mandatory."

They said they found only one other report of successful rehabilitation of the hemiplegic amputee,

but there are probably other isolated incidents, particularly among wounded servicemen.

Walking with an artificial leg is easier if the amputation occurs before paralysis, they said. It is also less difficult if the amputation is opposite the paralysis. The patient with this kind of disability cannot be expected to walk on the paralyzed leg alone, so an artificial leg is "mandatory" to give the needed balance. If the muscles on the amputated side are paralyzed, walking is more difficult, but "not impossible."

"Among the general factors common to all rehabilitation, the most important is motivation," they said. "Also relevant to the outcome of therapy is the family constellation in which the individual is set: cooperation, love and understanding by the family are essential to rehabilitation."

They said a 58-year-old man suffered right side paralysis and amputation but learned to walk in 18 months. A 66-year-old man with right side paralysis and left amputation walked with a single cane and could climb stairs with a hand rail.

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Homeless Men Probably Spread Much TB

(Continued from Page 22)

tories, whether in cheap hotels or in the various rehabilitation centers throughout the country," they said. "They are generally in a fatigued physical condition, and their standards of cleanliness and personal hygiene tend, through economic necessity, to be low.

"This rate occurs in a population group that is very likely to take temporary jobs as food handlers—cooks, cooks' helpers, dishwashers, etc.—situations in which the possibility of transmission of the disease to the general population is a factor."

They said there is no reason to believe the incidence in Minneapolis is much different from the rate in other cities. In fact, the incidence might be higher if the survey had covered the older, more permanent residents of Skid Row, they said.

"This survey reveals an important aspect of the public health problem of tuberculosis," they said. "The homeless men quite probably constitute a primary source of reinfection for tuberculosis in the United States.

"Any public health program that has as its aim the eradication of tuberculosis in our population should take particular account of this segment of the population."

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Drinking alfalfa seed tea not only won't cure arthritis but may give the drinker skin trouble and the doctor a headache.

A Roanoke, Va., physician recently stated the skin trouble is hard to diagnose unless the doctor knows his patient has been drinking the tea. The trouble is, most patients apparently don't like to admit they've been relying on the old home remedy.

Dr. William H. Kaufman reported on two such cases in a recent issue of the *Journal of the American Medical Association*. He said he knows of no previous reports of skin trouble from alfalfa seed.

"The practice of taking alfalfa seed for the pur-

pose of relieving arthritis, diabetes, and related disorders is apparently widespread," he said, "and there is likelihood that further cases will appear."

He said two patients suffered skin eruptions as a result of the remedy and that four other possible cases have been found. One of his two patients, an elderly woman, said she had concealed the fact that she drank the tea because she was "ashamed to admit it." The other admitted "with great reluctance" that she used the tea.

The Council on Pharmacy and Chemistry of the A.M.A. said it has received numerous questions about the value of alfalfa preparations in treating arthritis and diabetes, Dr. Kaufman said.

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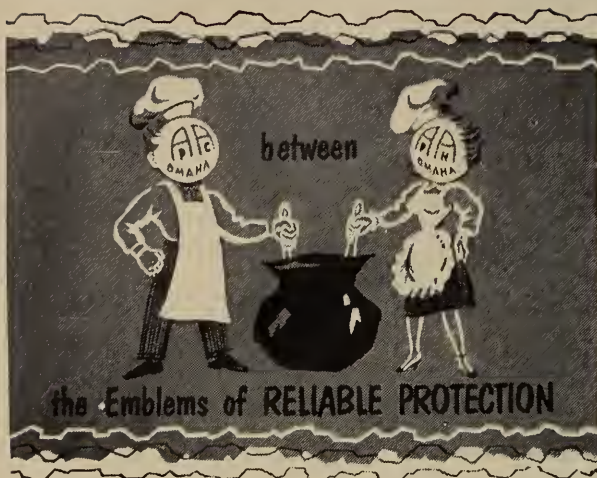
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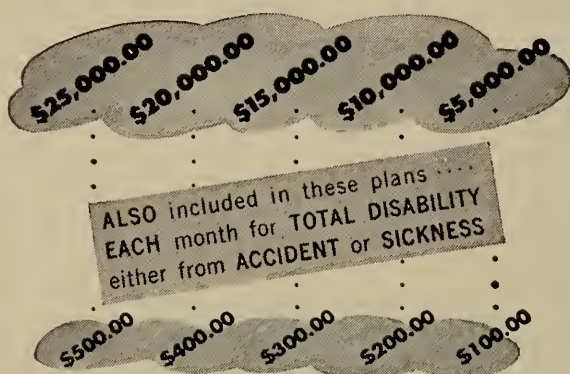
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Describes Health Behind Iron Curtain

Communist boasts of good health and medical care are almost entirely false and hide the heart of the problem—the “human aspect of medicine,” a study by the Free Europe Committee, Inc., shows.

Walter Henry Nelson, New York, director of magazine information for the American Heritage Foundation, reported on physicians behind the iron curtain in a recent issue of the *Journal of the American Medical Association*. He based his report on the findings of the Free Europe committee.

The iron curtain doctor is a “new Soviet man” first and a physician last, he said. He must consider his worker-patients as “economic factors,” precious only so far as their health advances the world-wide Soviet power policy.

“Under Soviet-sphere state capitalism, plant physicians predetermine the number of persons entitled to be sick,” Nelson said. “Physicians are afraid to grant sick leave to too many persons, for this would tend to show that they are not taking sufficient care of the workers’ health. Yet poor diet, constant nervous tension, and excessively high work norms make adequate care difficult.”

While physicians are officially allowed to practice privately, few do because of the required “exhausting” day’s work at state institutions, because of exorbitant taxes on private income, and because few persons can afford private consultation. Private practice probably is allowed only because “Communist bosses hesitate to patronize the state institutions, the conditions of which they know only too well.” Officials’ physicians live well. The rest earn about as much as a skilled worker.

Medical students are accepted by class origin and political reliability, and must pass not only medical courses but tests on politics and military principles. They are not allowed to choose their specialties. The Five-Year Plan determines what kind of physicians are needed and where, and a committee annually selects students for each field, a former Hungarian medical school lecturer told Radio Free Europe.

A Bulgarian who escaped from the Soviet zone told RFE that “the best way to recommend a physician in Sofia these days is to say he is of prewar academic vintage” and trained before the strict new policies became effective.

Medical science also has suffered by the outlawing of certain Western scientific principles. If a doctor gets good results with a “forbidden” treatment, he must credit some other cause, or pretend the treatment was just introduced, “with a gigantic ‘Made in Russia’ tag attached.”

Stalin’s ideas remain the basic medical scientific principles, a Bucharest publication said, and as a result physicians “lack humility and a sense of respect for the individual and often are brutal and insulting.”

(Continued on Page 46)



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*Kaufman, R. H.; Mendelowitz, S. M., & Ratzan, W. J.: *Am. J. Obst. & Gynec.* 65:269, 1953.

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DETROIT, MICHIGAN

Describes Health Behind Iron Curtain

(Continued from Page 40)

State medicine burdens the physician with clerical work and adds official mismanagement to his woes. A district physician may work 36 hours straight, being responsible for as many as ten thousand persons. One medical center in Budapest serves a quarter million.

A Sofia newspaper said the Pavlov general hospital has no heat, incredible plumbing, no elevator, little furniture, and a leaky roof.

"Such discomforts are not shared equally by all persons," Nelson said. "Far from intending to bring

about the 'equality' it does propose, Soviet-style medicine serves to further an intentional stratification enabling the rulers to favor their friends and doom their opponents.

"Medical aid is made available in proportion to the patient's contributions to the aims of the ruling hierarchy, and only incidentally according to actual needs in purely medical terms. In the light of the foregoing facts, it appears that the 'new' Communist medical services compound injustice, restrict the right to health, take away all benefit to physician and patient alike, and enable the state to decide who will be rewarded with the gift of good health," he said.

(Continued in Back Advertising Section, Page 60)

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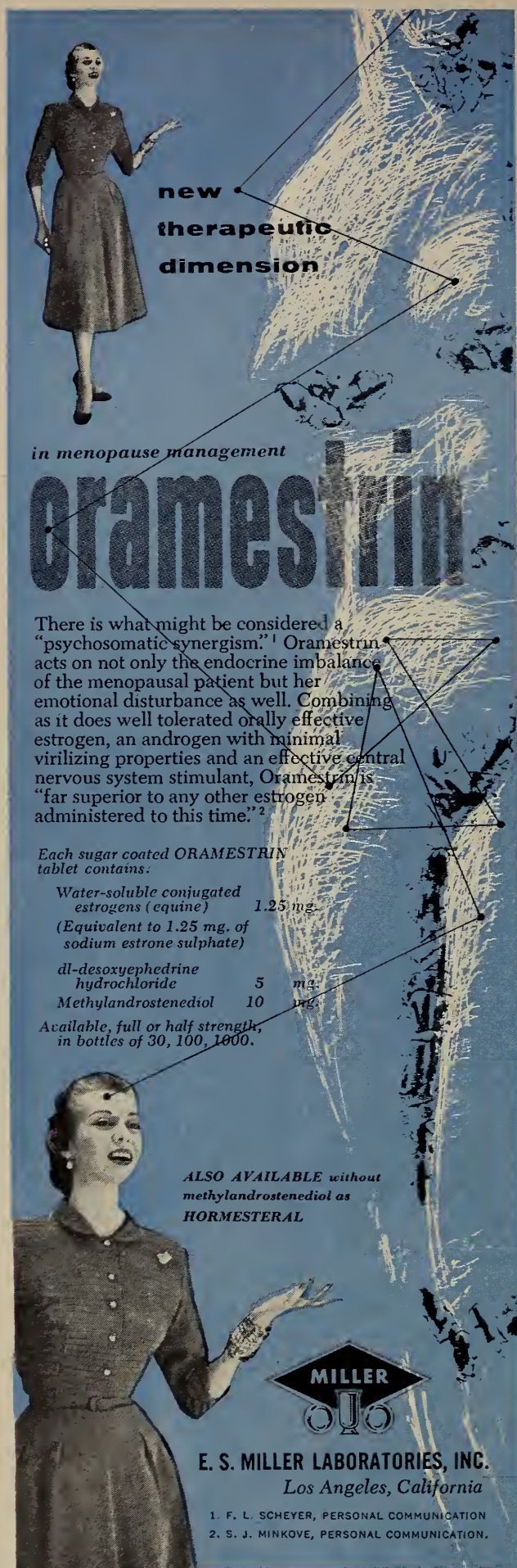
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Three Unusual Operations Near Heart Described

Surgical success with new techniques and wider use of blood vessel grafts for patients with serious and unusual vessel disorders was reported recently by physicians from New York City, Chicago and Houston.

Three operations were described in a recent issue of the *Journal of the American Medical Association*.

In Chicago, three doctors successfully cut and relocated a misplaced vein which pressed against the windpipe and aorta and was threatening to suffocate a five-months-old baby. Without the operation there seemed little hope for the infant's life, they said.

In Houston, in perhaps the first operation of its kind, a patient's circulation was stopped for an hour while a new section was grafted into a faulty main artery just above the heart. The patient suffered no apparent damage to the spinal cord or vital organs which usually follows stoppage of circulation for even a few minutes. "Freezing" the patient by gradual cooling for several hours before the operation prevented damage.

A New York operation indicates a successful surgical method is now available in the "desperate plight" of patients suffering closure of the main blood vessel leading into the heart. Doctors used a preserved arterial graft to start circulation again.

The Chicago infant had trouble breathing just after birth, and at five months "it had become obvious that one of the constantly recurring attacks ... would prove fatal," Drs. William J. Potts, Paul H. Holinger and Arthur H. Rosenblum said. They said the child's condition was "unique."

"The future of the child was hopeless" unless something could be done, while an operation was dangerous and might accomplish nothing, the physicians said. The parents agreed to the attempt. The child's left pulmonary artery, which carries blood from the heart to the lungs, was cut, moved to its normal position, and sewed together. Since then the baby has been free of trouble except for occasional noisy breathing.

Drs. Michael E. DeBakey and Denton Cooley, Houston, said they performed what appeared to be the first successful graft on the aorta where it arches over the heart. This is the trunk from which the entire arterial system proceeds. Grafts have been used on straight portions of vessels in similar cases of aneurysms, or balloon-like swellings in the vessel wall. Grafting of the aorta above the heart has been limited because of the increased danger of blood-deficiency damage to vital organs.

The physicians said their success indicates that "freezing" the patient is an effective way of slowing circulation for long periods while grafts are performed above the heart. Attempts to provide detours

(Continued in Back Advertising Section, Page 66)

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Valvular Heart Disease

The Role of Cardiac Catheterization in Preoperative Evaluation

ARTHUR SELZER, M.D., San Francisco, and
HERBERT W. BRADLEY, M.D., Yuba City

ACQUIRED VALVULAR HEART DISEASE is gradually entering the category of surgically correctible cardiac lesions. Recent strides in the development of surgical techniques for valvular repair suggest that the time may be near when a comprehensive cardiac valvuloplastic operation will be feasible. At present, however, the only operation that has been generally accepted and shown to give satisfactory results with low mortality rate is the correction of mitral stenosis by finger fracture or valvulotomy. The excellent results that may follow such an operation have been attested by clinical observations on large series of patients with mitral stenosis. However, it remained for the quantitative circulatory studies by means of cardiac catheterization to show conclusively the dramatic improvement in circulatory dynamics that may occur after operation, thereby satisfying skeptics that the clinical improvement is not due to prolonged bed rest and nonsurgical or extracardiac influences.

Thus, cardiac catheterization plays a major role in the assessment of operations on the heart. Its main value, however, lies in permitting the collection of hemodynamic data in a research laboratory in series of cases rather than its use as a diagnostic procedure in an individual case. This is largely due to the fact that in left sided valvular lesions cardiac catheteriza-

• Cardiac catheterization studies performed in research laboratories showed that advanced mitral stenosis is associated with a characteristic dynamic pattern which is reversible by mitral valvulotomy. In the process of the selection of patients for mitral valvulotomy, occasionally there are instances in which a decision cannot be reached on the basis of ordinary clinical methods of examination. In some such cases cardiac catheterization may be of decisive value by demonstrating, or by failing to demonstrate, the dynamic pattern of mitral stenosis. Cases in which this diagnostic procedure is most often helpful are those of mild mitral stenosis and those in which there are combined valvular defects.

tion provides only inferential information and not direct diagnostic details which are so helpful in congenital cardiac defects affecting the right heart. The purpose of this discussion is to present briefly the contribution of cardiac catheterization to the diagnosis of left sided lesions, and to cite specific instances in which such a method may help to decide whether operation is indicated in an individual case.

The comprehensive catheterization study necessary for the assessment of valvular cardiac lesions can only be performed in a fully equipped research laboratory. It should be done in a condition as close to a basal state as possible, with preparations similar

From the Medical Service, Veterans Administration Hospital, and the Department of Medicine, Stanford University School of Medicine.

Supported by a grant from Monterey County Heart Association.

Presented before a Joint Meeting of the Sections on General Medicine, General Surgery and Anesthesiology at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

to those for a standard basal metabolism test. The essential equipment includes a reliable recording system capable of reproducing graphically undistorted pressure tracings. Oxygen consumption should be measured by the analysis of expired air and the total ventilation and respiratory quotient included in the measurements. A simple and readily reproducible exercise test lasting seven to ten minutes should be available to be performed by the patient in recumbent position. Pressure tracing should be recorded from the "wedge" position* in the pulmonary arterial branch simultaneously with an electrocardiographic tracing for the purpose of timing. Pulmonary arterial pressure should be observed before and during exercise. Right ventricular and right atrial curves should be recorded with special care in assessing the "zero" reference point in relation to the thorax. Determination of cardiac output by the Fick principle should be made before exercise and during the last three minutes of the exercise period with samples of mixed venous blood withdrawn from the main pulmonary artery.

It is generally agreed that in pure mitral stenosis cardiac catheterization is not necessary as a routine preoperative procedure. However, there are situations in which the degree of mitral stenosis has to be assessed by more accurate procedures than the routine physical examination and electrocardiographic and roentgenographic evaluation. In such instances cardiac catheterization frequently becomes the method of choice.

The average hemodynamic findings in a typical case of mitral stenosis and the change which takes place after successful valvulotomy are presented in the following case summary.

CASE 1. A 37-year-old man had pronounced limitation of activities due to dyspnea and tiredness. He could only engage in semisedentary work. Upon physical examination findings typical of mitral stenosis were noted—a loud diastolic and presystolic rumbling murmur in the apical region of the heart, with a loud first sound in this area, a prominent mitral opening snap and an accentuated and reduplicated second sound at the left upper sternal border. An electrocardiogram revealed a vertical rotation of the heart with prominent R-waves and inverted T-waves in precordial leads V_1 and V_2 , suggestive of an enlarged right ventricle, and tall and bifid P-waves. A roentgenogram of the thorax showed no generalized cardiac enlargement but there was evidence of dilation of the left atrium and of the pulmonary artery. The hemodynamic data are presented in Chart 1, where it can be seen that moderately severe pulmonary hypertension, low cardiac output (cardiac index) and increased arteriovenous difference were present. During exercise there was a decrease, instead of an increase, in the cardiac index. Such

*The catheter wedged firmly into a smaller branch of the pulmonary artery records not pulmonary arterial pressure but a pressure curve reflecting the dynamic events in the left atrium.

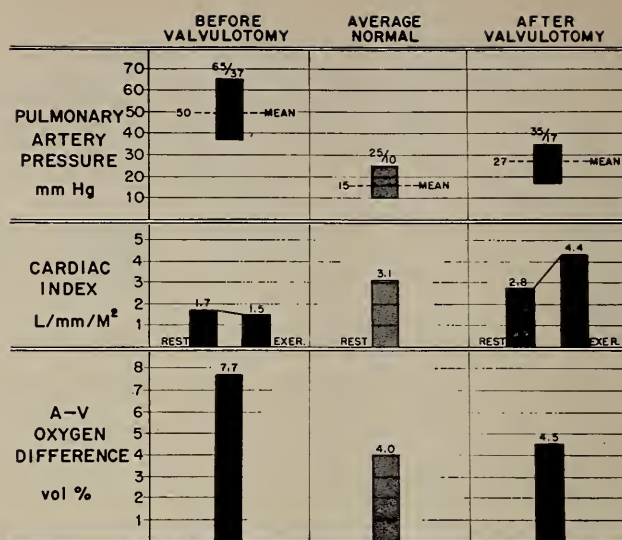


Chart 1.—Graphic presentation of the essential findings on cardiac catheterization before and after mitral valve operation in Case 1. The central column represents average normal values.

findings, with the addition of an elevated pressure reading in the pulmonary wedge position (which was not obtained in this case) can be considered as characteristic for advanced mitral stenosis. The patient underwent mitral commissurotomy and the tolerance for exercise was so much increased after the operation that he could do strenuous work ten hours a day without discomfort.

Upon examination a year after operation the heart sounds and murmurs were essentially unchanged from those heard preoperatively. However, the electrocardiographic evidence of right ventricular hypertrophy was no longer present and in a roentgenogram of the chest the left atrial and pulmonary arterial segments appeared more nearly normal. Hemodynamic data (Chart 1) showed only slightly elevated pulmonary arterial pressure, a cardiac output (index) well within normal limits, and a normal increase in circulation on exercise.

It appears from the foregoing presentation that an eminently successful operation reverted the circulatory changes of advanced mitral stenosis into those of mild stenosis. The persistence of auscultative symptoms and the mild elevation of the pulmonary arterial pressure leaves no doubt that a narrowing of the mitral orifice was still present. However, barring restenosis of the mitral orifice, the degree of circulatory derangement could well be consistent with a normal or almost normal life expectancy and a reasonably active life. This is worthy of emphasis in view of some diagnostic difficulties which may arise in milder cases of mitral stenosis, as is exemplified in the following case.

CASE 2. The patient, a 30-year-old woman, said she had had limitation of activities consisting of a feeling of exhaustion associated with some shortness of breath both at rest and during exercise for a

TABLE 1.—Cardiac catheterization findings in Case 2

Pulmonary wedge pressure.....	9 mm. mercury
Pulmonary artery at rest.....	21/14 mm. mercury (mean 16)
Pulmonary artery during exercise.....	26/15 mm. mercury (mean 17)
Right ventricle.....	20/2 mm. mercury (mean 10)
Cardiac output (index) at rest.....	3.7 liters per min. (index 2.5 lit/min/m ²)
Cardiac output (index) during exercise.....	4.5 liters per min. (index 3.1 lit/min/m ²)

TABLE 2.—Cardiac catheterization findings in Case 3

Pulmonary wedge pressure.....	30 mm. mercury (mean 30)
Pulmonary artery at rest.....	52/33 mm. mercury (mean 42)
Pulmonary artery during exercise.....	69/36 mm. mercury (mean 55)
Right ventricle.....	55/8 mm. mercury (mean 29)
Cardiac output at rest.....	2.9 liters per min. (1.4 lit/min/m ²)
Cardiac output during exercise.....	4.3 liters per min. (2.2 lit/min/m ²)

period of over three years. Upon auscultation the classical findings of mitral stenosis were noted—namely, a loud diastolic rumbling apical murmur with a presystolic accentuation, loud first sound, an opening snap and an accentuated second pulmonary sound. A roentgenogram of the chest showed mild enlargement of the shadow of the left atrium. An electrocardiogram showed a normal record with a bifid P-wave. Cardiac catheterization was performed with results shown in Table 1. Intracardiac, pulmonary arterial and wedge pressures were entirely normal and the cardiac index was within normal limits and increased with exercise. The clinician evaluating this case had some doubt in accepting at face value the patient's story of limitation of activities. The data obtained on cardiac catheterization proved of great value, for they permitted the conclusion that authentic cardiac symptoms were absent or unimportant and that tiredness and "shortness of breath" were in reality manifestations of neurocirculatory asthenia. Obviously, surgical therapy of mitral stenosis was not indicated even though the classical physical findings of pure mitral stenosis were present.

Mitral insufficiency presents an important problem in the preoperative evaluation of patients with rheumatic heart disease. Severe mitral insufficiency constitutes a contraindication to mitral valvulotomy. The diagnosis of mitral valve disease with predominant mitral insufficiency may be easy in its typical form, when a loud apical systolic murmur is heard and is conducted to the left scapula, and when evidence of left ventricular enlargement is found upon physical examination and by electrocardiogram and roentgenogram. However, in many instances the unknown extent of mitral insufficiency in a case of

mitral stenosis severe enough to warrant surgical consideration may present great difficulty. In such cases supplementary information is sought by a fluoroscopic or kymographic study of the motion of the left atrium during systole, by cardiac catheterization or by angiocardiology. Cardiac catheterization may on occasion supply definitive information, which is exemplified by the following case.

CASE 3. A 43-year-old man with rheumatic heart disease had moderate to severe limitation of activities due to dyspnea. Some months before the present hospital admission, there was a bout of cardiac failure which was promptly controlled by the use of digitalis and a brief course of mercurial diuretics. Upon auscultation a long and loud rumbling apical diastolic murmur, a mitral opening snap and a reduplicated second pulmonic sound were noted. In addition there was a moderately loud systolic murmur which was heard at the apex and along the sternal border up to the base of the heart. At the lower left sternal border a soft blowing early diastolic murmur was also heard. The blood pressure was normal. An electrocardiographic tracing was suggestive of hypertrophy of both ventricles. A roentgenogram of the chest showed an enlarged left atrium, a moderately large pulmonary artery segment and an enlargement of both cardiac ventricles.

Cardiac catheterization was performed with the results shown in Table 2. Elevated wedge pressure and moderately elevated pulmonary artery pressure with considerable increase on exercise were indicative of mitral stenosis of considerable severity. However, a pressure tracing from the pulmonary wedge position (Figure 1) showed a prominent systolic wave which was thought to be caused by significant mitral regurgitation. Furthermore, it was noted that the cardiac output was very low but increased in a normal manner with exercise. Such a response is seldom seen in "tight" mitral stenosis where mechanical obstruction limits the flow through the mitral orifice (see Chart 1). Thus the data obtained by cardiac catheterization suggested that in this case mitral insufficiency was not only present but that its effect predominated in the dynamic pattern of the circulatory derangement. On the basis of these findings it was felt that the patient probably would not benefit from operation on the mitral valve, and could easily be made worse.

CASE 4. A somewhat similar clinical problem was present in the case of a 39-year-old man whose activities were severely curtailed by dyspnea and weakness and who was gradually becoming worse.

An apical diastolic rumbling murmur was heard, with an accentuated first sound. The second pulmonary sound was very loud. A moderately loud systolic and a faint early diastolic murmur were heard at the lower left sternal border with the systolic murmur conducted to the left axilla on one hand, and to the base of the heart and the great vessels on the other hand. A totally irregular pulse was noted. The pulse pressure was normal. An electrocardiogram revealed atrial fibrillation and a "balanced" pattern

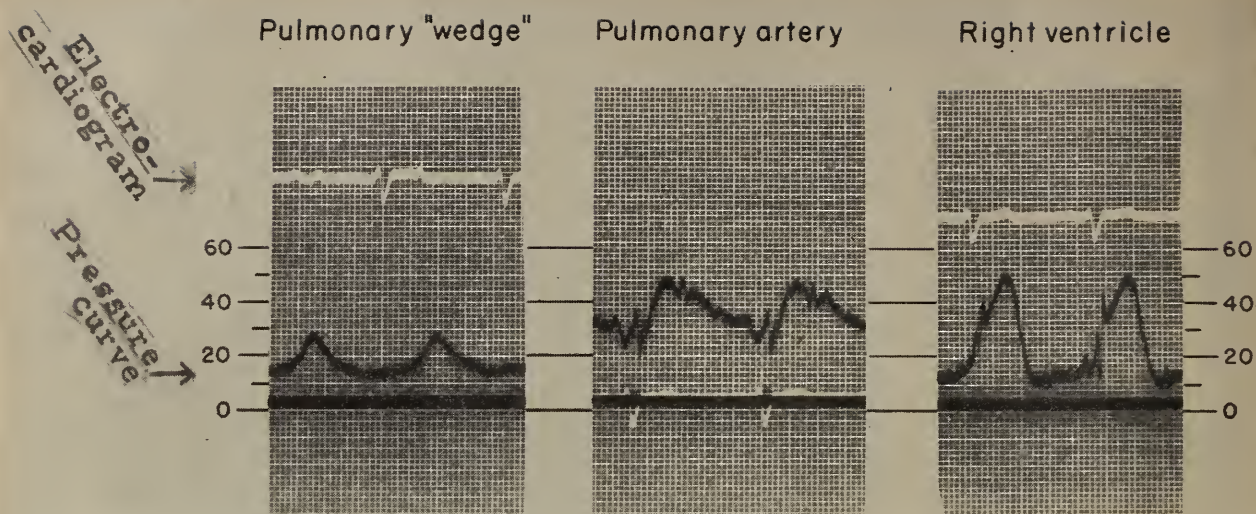


Figure 1.—Reproduction of the pressure tracings from the pulmonary “wedge” position, the main pulmonary artery and the right ventricle in Case 3. The high systolic wave in the pulmonary wedge tracing is characteristic of mitral insufficiency.

of the ventricular complexes suggesting hypertrophy of both ventricles. A roentgenogram showed enlargement of all the cardiac chambers.

Cardiac catheterization (Table 3) showed moderate to severe elevation of pressure in the pulmonary wedge position, in the pulmonary artery and the right ventricle. A steep further increase in pressure occurred upon exercise. The cardiac output was very low and showed an insignificant increase on exercise. It was thought in this case that the dynamic pattern of mitral stenosis predominated to such an extent that mitral valvulotomy might reasonably be expected to relieve some of the disability, and in view of the progression of symptoms the surgical risk appeared justified. Mitral valvulotomy was performed and tight mitral stenosis and a mild regurgitant jet were observed.

The illustrative case summaries presented cite actual instances in which cardiac catheterization played a major role in deciding whether or not cardiac operation was advisable in a given patient. They exemplify the main problems in which help can be expected from this procedure. It is obvious that cardiac catheterization is not necessary in the average case of mitral stenosis in which the lesion has led to the appearance of incapacitating symptoms. The effect of mitral stenosis upon cardiodynamics is well enough known so that alteration of pressures and flows can roughly be predicted from the results of conventional methods of examination. Since cardiac catheterization does not directly prove or disprove the presence of mitral stenosis (the evidence is not conclusive as it is in pulmonary stenosis), one has to rely on the pattern of findings usually associated with significant degree of mitral valve narrowing. This “hemodynamic pattern” of mitral stenosis is

TABLE 3.—Cardiac catheterization findings in Case 4

Pulmonary wedge pressure.....	25 mm. mercury (mean 25)
Pulmonary artery at rest.....	58/33 mm. mercury (mean 45)
Pulmonary artery with exercise.....	90/60 mm. mercury (mean 72)
Right ventricle.....	60/2 mm. mercury (mean 27)
Cardiac output at rest.....	2.3 liters per min. (index 1.2 lit/min/m ²)
Cardiac output during exercise.....	2.5 liters per min. (index 1.3 lit/min/m ²)

TABLE 4.—Hemodynamic pattern of mitral stenosis

	mm. Mer- cury	Liters min./ m. ²	— Normal — mm. Mer- cury	Liters min./ m. ²
Pulmonary wedge pressure	20-40		5-10	
Systolic wave.....	> 5			
Pulmonary artery pressure:				
Systolic	< 50		20	
Mean	< 30		12	
Cardiac index.....		1.5-2		3.1

Effect of exercise: (a) Further increase in pulmonary artery pressure; (b) Static cardiac index.

summarized in Table 4. The pattern is of course not specific for mitral stenosis; each of the components occurs in other forms of cardiac disease.

Pulmonary wedge pressure constitutes the most important diagnostic finding associated with tight mitral stenosis. It has been shown that pressure reading and the shape of the curves obtained from the pulmonary wedge position reflect closely the dynamic events in the pulmonary veins and in the left atrium. Thus, pulmonary wedge pressure is elevated in mitral stenosis, in left ventricular failure and in left sided constrictive pericarditis. Since the

latter two conditions can usually be eliminated diagnostically on clinical grounds, elevation of pulmonary wedge pressure constitutes not only an important confirmatory finding of mitral stenosis, but a rough index of its severity. Conversely, the absence of elevation of pulmonary wedge pressure makes the diagnosis of significant mitral stenosis untenable. The finding of pulmonary hypertension with a normal pulmonary wedge pressure proves that pulmonary resistance is elevated at the level of the pulmonary arterioles, and in such circumstances clinical signs of mitral stenosis cannot be considered to be of surgical importance. The effect of mitral regurgitation upon the pulmonary wedge pressure is the appearance of a prominent systolic wave of more than 5 mm. of mercury. In severe mitral insufficiency the wedge pressure curve may exhibit a pulse pressure of over 20 mm. of mercury. The diastolic part of the curve shows the pressure to be normal unless significant mitral stenosis is also present or left ventricular failure ensues. While the presence of a significant wave of mitral insufficiency is of great diagnostic importance, its absence does not rule out mitral regurgitation.

Pulmonary hypertension occurs as a rule in significant mitral stenosis but is of no diagnostic importance because of its common occurrence in other cardiac conditions. The degree of pulmonary hypertension, however, permits distinction between early cases, in which moderate elevation of pulmonary arterial pressure is found, and advanced cases in which severe pulmonary hypertension indicates secondary changes in the pulmonary arterioles. The first form may be completely reversible by mitral valvulotomy, while the second form is only partially reversible. In mitral stenosis pulmonary arterial pressure almost always rises during exercise.

Low cardiac output with the patient at rest is found in the majority of cases of mitral stenosis. Often this phenomenon occurs early in the course of the disease, when pressures are only mildly elevated. It is, however, found also in most forms of cardiac failure and is therefore a non-specific finding. More important than the finding of a low resting output is the response of output to exercise. In cardiac failure the cardiac output increases on exercise (although not as much as in health) with the exception of some cases of very severe cardiac insufficiency. As a rule, static cardiac output means that a mechanically limiting factor exists within the heart and therefore points to severe stenosis of one of the four cardiac orifices. The static cardiac output in severe mitral stenosis is reversible by operation on the mitral valve (Chart 1).

The data obtained from the previously mentioned measurements during cardiac catheterization permit an estimation of the size of the mitral orifice by available formulae. However, the accuracy of these

formulae has not been generally accepted and the numerical expression of the size of the mitral orifice as thus computed may be irrelevant once the diagnosis of tight mitral stenosis is established and the indication for operation ascertained.

Thus, the comprehensive pattern of the effect of mitral stenosis upon cardiodynamics may be utilized in doubtful cases in presurgical evaluation. As exemplified by the three case summaries, aid obtained from cardiac catheterization is greatest in two categories of cases. The first category is mild mitral stenosis, where the extent of disability and its connection with the valve defect cannot be determined with certainty by ordinary clinical means. In such cases normal or almost normal cardiac dynamics make it most unlikely that the patient suffers from the result of mitral valve obstruction, and therefore unlikely that operation on the valve would be of benefit. Conversely, the dynamic pattern of significant mitral stenosis exists occasionally in cases in which cardiac strain and enlargement are not yet recognizable by electrocardiographic and roentgenographic changes. In such instances mitral stenosis may cause incapacitating symptoms which might be relieved by operation even though clinical findings as regards the heart are within normal limits and lead to erroneous conclusion that symptoms are extracardiac.

In combined valvular lesions it is important to determine whether mitral stenosis is the predominant lesion and is primarily responsible for the incapacitating symptoms, for in such cases mitral valvulotomy can be of benefit. In patients with combined valvular defects various findings of the catheterization study may be used in differential diagnosis. The most important feature of the dynamic pattern of mitral stenosis in such cases is the low and static cardiac output, which, in the absence of severe aortic stenosis, strongly suggests tight mitral stenosis, for usually in mitral or aortic insufficiency there is some increase of blood flow on exercise. Elevated pulmonary arterial pressure may be present in mitral insufficiency or in aortic valve defects combined with left ventricular failure. However, severe pulmonary hypertension is strongly indicative that mitral stenosis is predominant. Finally, pulmonary wedge pressure may reveal the presence of mitral insufficiency.

Cardiac catheterization is a complex diagnostic procedure that should be performed primarily in a research laboratory. Routine use of the procedure as an aid to preoperative diagnosis in valvular heart disease is neither indicated nor desirable. It does, however, provide a way to get information, in cases in which diagnosis is in doubt, that cannot be obtained by any other means, thus permitting the preoperative assessment of some such cases.

450 Sutter Street.

Blood Volume in Cardiac Decompensation

Determinations by Use of Radiochromium

WILLIAM A. REILLY, M.D., R. M. FRENCH, M.D.,
F. Y. K. LAU, M.D., K. G. SCOTT, Ph.D., and
WILLIAM E. WHITE, San Francisco

IN CONGESTIVE HEART FAILURE, the blood volume has been considered generally to be increased.^{1, 2, 5, 6, 7} Recently Prentice and co-workers⁹ and Ross and co-workers,¹¹ by tagging erythrocytes with P³² obtained evidence that the blood volume during heart failure is not always increased.

Nylin and Hedlund⁸ in 1947 summarized the opinions of various investigators regarding the efficiency of various methods of determining the volume of blood. They concluded that the dye and carbon monoxide methods may result in falsely high values because of leakage of dye from the vascular system and because carbon monoxide leaves the erythrocytes and goes to myoglobin. More accurate determinations of blood volume probably can be made by using radioisotopes to tag erythrocytes.^{3, 4, 5, 7, 9, 12}

In the present study radiochromium was selected as the tagging material for the following reasons:¹⁰ It passes into the erythrocytes in vitro if used in the sodium chromate form; it remains in the erythrocytes for 12 to 24 hours approximately at the original concentrations, permitting unhurried and accurate measurements; it emits mainly gamma rays which are detected efficiently by a scintillation counter; the radiation dosage to the subject is low and is not dangerous.

METHOD

Ten milliliters of heparinized blood was withdrawn into a sterile rubber-stoppered tube containing 10 to 15 microcuries of sodium chromate (Na₂Cr⁵¹O₄ of high specific activity* carried by no more than 100 to 300 micrograms of inert chromium. The sample was gently agitated by a shaker for 45 minutes at room temperature to permit maximal uptake. This was 60 to 98 per cent of the Cr⁵¹ as Na₂Cr⁵¹O₄ by the erythrocytes. The uptake is inversely proportional to the amount of carrier chromium present. The excess Na₂Cr⁵¹O₄ and plasma was removed by washing and centrifuging (1559 gravi-

• *Radiochromium has these advantages for the measurement of whole blood volume: it remains in the erythrocytes many hours; it can be measured easily and accurately; the amount of radiation from it is very low.*

As measured by the radiochromium method, the whole blood volume of normal patients was determined to be 65.6 cc. \pm 5.95 cc. per kilogram of body weight or 2.49 \pm 0.28 liters per square meter of body surface.

In a majority of a series of patients with heart disease, hypervolemia was found during right ventricular failure but not in those having left ventricular failure or mitral stenosis alone.

ties) the red cells three times with normal saline solution. The cells were resuspended to approximately the original volume by adding normal saline solution; an aliquot of 0.5 ml. of this cell-saline mixture was diluted to 50 ml. for a standard, used for determining the number of counts per ml. injected. The carefully noted volume remaining of the cell-saline mixture was injected intravenously into the patient.

In subjects with normal circulation, complete mixing of the injected material with the circulating blood required between 10 and 15 minutes but in some patients with cardiac disease 30 minutes was necessary. To be safe, samples (5 to 7 ml.) were taken for measurement 60 minutes after injection.

The blood volume, which is apparent and not truly total, was measured on the sample of whole blood, rather than the erythrocyte mass, in order to avoid the differences between the hematocrit of blood from large vessels and the hematocrit of all the blood in the body. Although it was not done, it would have been possible to compute the erythrocyte and plasma volumes by using the hematocrit values. The formula, employing the dilution of the tagged dose, was:

Blood volume in cc. =

$$\frac{\text{Total counts per second of injected Cr}^{51}}{\text{Counts per second per cc. of blood withdrawn}}$$

The reliability of the method was tested by re-injecting each of 17 patients with a second larger

From the Radioisotope Unit and the Medical Service, Veterans Administration Hospital, San Francisco 21, California, and the Department of Radiology, University of California School of Medicine, San Francisco.

Presented in part at the combined meeting of the Section on General Medicine, California Medical Association, and the California Heart Association, Los Angeles, California, May 9-13, 1954.

*The sodium chromate⁵¹ was obtained from either Oak Ridge National Laboratory or the Abbott Laboratories of North Chicago.

Whole Blood Volume

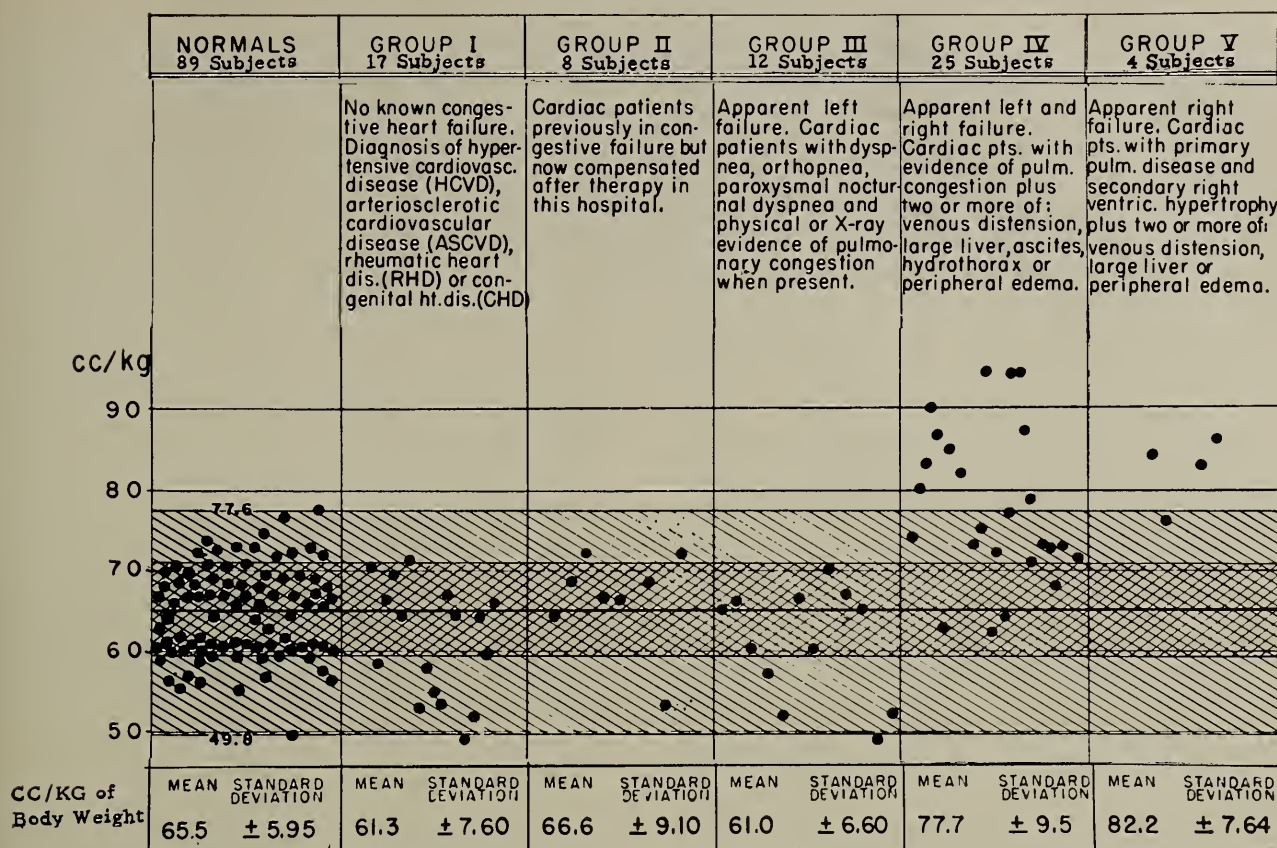


CHART 1

dose of Cr^{51} one hour after the first dose. The differences between the two computations of total volume ranged from as little as 30 cc. to as much as 540 cc. or from 0.4 per cent to 10 per cent.

CLINICAL TESTS

Normal values were determined on 89 adult males, mostly ambulatory, who were awaiting elective surgical repair of such conditions as hernia, varicose veins and hemorrhoids. None had conditions which conceivably might have disturbed the volume of blood. Fifty-six patients with cardiac disease were tested. They were divided into five groups (see Chart 1). Some patients were included in one group at one time and in a different group at the time of subsequent tests owing to changes in their status in the interim. Group I (17 patients) was made up of patients who never had had congestive heart failure; Group II (8 patients) of those who had had congestive failure but were in a compensated state at the time of the test; Group III (12 patients) those with left-sided failure manifested by pulmonary congestion; Group IV (25 patients) those with left and right ventricular failure; Group V (4 patients) those with primary pulmonary disease and right-sided failure.

RESULTS

Normal values were:

	Total cc.	cc. per kg. of body weight	Liters of blood per square meter of body area
Range	2500 - 6074	45.8 - 77.6	1.79 - 3.05
Mean ± standard deviation		65.5 ± 5.95	2.49 ± 0.28

In the patients with cardiac disease (see Chart 1), Group I, Group II, and Group III, the blood volumes were within the normal range; in Groups IV and V the majority had significantly elevated blood volumes. Statistical analysis showed data for Group I were highly significant (probability = 0.01); Group II showed no significant difference from normal. Group III volumes were significantly lower than normal calculated as cubic centimeters per kilogram of body weight "wet"† (probability = 0.02) but almost the same when calculated at "dry" weight. Using liters of blood per square meter of body surface area, the volumes were below normal "wet" (probability = 0.03) but not significantly lower "dry" (probability = 0.3). Volumes of Group IV and V were significantly higher whether calculated as cubic centimeters per kilogram of body weight or L./Sq.M., "wet" or "dry" weight (probability = less than 0.01).

† "Dry weight" was the lowest weight reached after compensation was established.

DISCUSSION

Increased blood volumes occurred in the majority of persons having signs and symptoms of right ventricular failure, for example, venous engorgement, ascites and peripheral edema. In no case in which the patient had signs and symptoms of pulmonary congestion alone (due to left ventricular failure or mitral stenosis) was the blood volume elevated. However, there were five patients having the signs and symptoms of right ventricular failure who had blood volumes within the range of normal; when computed on "dry" weight only one of these was normal. The authors have no explanation for this finding.

Although not included with the results there were 16 patients who had serial blood volume studies during treatment for cardiac failure. As their peripheral edema, ascites and liver engorgement disappeared the blood volumes reverted toward normal values; the opposite was true in patients who became clinically worse. It was also noted that the increased volumes in patients with cor pulmonale reverted to the normal range as the signs and symptoms of right ventricular failure disappeared under therapy and that the total increases of the blood volume in these patients was not entirely due to secondary polycythemia.

The findings in the present study closely approximated those of Nylin and Hedlund⁸ who also found hypervolemia most pronounced in patients with severe edema and slight in those with pulmonary congestion. In the present series the hypervolemia was roughly proportional to the amount of edema and excess body weight. Etiological factors (rheumatic heart disease, arteriosclerotic heart disease, hypertensive cardiovascular disease, etc.) had no apparent relation or effect on the blood volume in any given patient in any of the groups tested.

The chain of events in the evolution of cardiac failure has been a controversial subject. Probably the most generally accepted definition of cardiac failure is an insufficient output relative to the needs of the organism. Insufficient output of the left ventricle results in a relative state of anoxia; the organs such as the kidneys, liver and endocrine glands evoke reactions to retain salt and water. The exact hemodynamics in all the mechanisms is not known. Apparently at the stage of cardiac failure when only pulmonary congestion is present there is no hypervolemia, according to the results noted in the present study, even though these patients retain salt and water as shown by diuresis and weight loss following cardiac therapy. As Ross¹¹ pointed out, there may be a relative shift of the total blood volume to the pulmonary vascular bed without an overall blood volume increase in these patients with left ventricular failure alone. This may be explained by the rela-

tive inequality in the output of the two ventricles, the right ventricle ejecting more blood per beat than the left. Clinically, this theory has some support in that the pulmonary congestive signs and symptoms are relieved partially when the right ventricle fails. With the failure of the right ventricle there is the factor of less venous blood being passed to the pulmonary vascular bed with a greater volume of blood being pooled in the greater venous circulation. The authors feel that this venous pooling and congestion probably contributes greatly to the hypervolemia as well as to the hepatomegaly, ascites and peripheral edema. It is recognized that there are many factors that enter into the problem of cardiac failure and that this venous pooling may not be the main factor in any given patient.

By this method the whole blood volume of normal patients was determined to be 65.5 cc. \pm 5.95 cc. per kilogram of body weight or 2.49 \pm 0.28 liters per square meter of body surface. In a majority of a series of patients with heart disease hypervolemia was found during right ventricular failure but not in those having left ventricular failure or mitral stenosis alone.

Forty-second Avenue and Clement Street.

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The Changing Picture in Surgery of Pulmonary Tuberculosis

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TO SEE IN WHAT WAYS the surgical treatment of pulmonary tuberculosis in recent years might reflect the general trend in treatment of the disease, which has been remarkably influenced by the pertinent antibacterial drugs, the authors reviewed their experience of the past 11 years in the operative treatment of 1,271 patients. It was hoped that the study might also give indication as to the direction surgical treatment might take in the immediate future.

The source of patients operated upon remained relatively constant, so that comparisons from year to year are valid. In the 11-year period of the study, 1,743 operations were performed upon 1,271 patients (Table 1). Eighty-one per cent (or 1,024) were patients treated in private practice who were referred from the Barlow Sanatorium or from medical colleagues in the vicinity. Nineteen per cent (or 247) were patients in the wards of two tax-supported hospitals.

SEX DISTRIBUTION

The ratio of female to male patients was a little more than six to four. That ratio remained fairly uniform over the period of study (Table 2) until the past year, when the proportion of males increased. The ratio was about the same for all types of operation with the exception that among patients who had resection the proportion of females was greater—about seven to three. Also, the female patients who had resection included a larger number with more extensive disease, so that among patients requiring pneumonectomy, female patients outnumbered males three to one. Conversely, in the group of patients needing the smallest amount of tissue resection (that is, segmental resection) the ratio of males to females was one to one.

TYPE OF OPERATION

In the eleven years covered by the study, pronounced changes took place in the type of operation performed (Table 3). In 1943 there were six minor

• In a review of the operative treatment of 1,271 patients with pulmonary tuberculosis in an 11-year period, it was noted that, beginning with 1947, there was a great increase, relatively, in the number of cases in which pulmonary resection was carried out. In 1943, the first year of the period of study, there were six minor operative procedures to every four major operations; in 1953 the ratio was one minor to nine major. This reversal reflects the discoveries of antibiotics for conservative therapy on the one hand and the advances in surgical techniques for major operative treatment on the other.

Now that it is safer, resection will probably be used more and more—including bilateral resection in "salvage" cases. On the other hand, with specific antibiotics available, there is a tendency at present to treat conservatively for longer periods in cases in which, formerly, minor operative procedures would have been carried out early.

procedures to every four major operations, but by 1953 the ratio was only one minor to nine major. Minor operations include phrenic nerve operations, severance of pleuropulmonary adhesions, rib resection for mixed tuberculous and pyogenic empyema and a few miscellaneous procedures. Major operations include the various extrapleural pneumonolytic procedures, pulmonary decortication, thoracoplasty and pulmonary resection.

PHRENIC NERVE OPERATIONS

In the year 1943, more patients had crushing of the phrenic nerve to produce paralysis of the diaphragm than any other operation (Table 3). As streptomycin and the other antibacterial drugs became available, and the use of pulmonary resection increased, crushing of the phrenic nerve was done in fewer and fewer cases. Other operations on the phrenic nerve, designed to produce a permanent diaphragmatic paralysis, have been abandoned.

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TABLE 1.—Extent of operation as related to sex of patients

Procedure	Male	PATIENTS			Male	TABULATED BY OPERATIONS			Total
		Female	No.	Pct.		Female	No.	Pct.	
Minor	211	331	61	542	211	331	61	542	542
Major	270	459	63	729	454	747	62	1201	1201
Total	481	790	62	1271*	665	1078	62	1743	1743

* Private patients 1024 (80.7%). Public hospital patients 247 (19.3%).

TABLE 2.—Ratio of male to female patients in 11-year period

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Total
Male	41	40	43	35	33	37	38	30	35	40	47	38
Female	59	60	57	65	67	63	62	70	65	60	53	62

TABLE 3.—Changing trends in use of various operations over an 11-year period

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Total
Minor Operations:												
Phrenic nerve operation.....	42	36	36	39	33	23	26	13	7	4	5	264
Lysis and/or thoracoscopy.....	9	13	23	18	45	47	27	24	11	10	1	228
Rib resection.....	5	5	7	4	2	3	1	2	2	3	1	35
Miscellaneous	3	0	1	0	0	5	1	1	1	0	3	15
Total	59	54	67	61	80	78	55	40	21	17	10	542
Major Operations:												
Extrapleural lysis.....	1	1	2	0	1	2	0	7	2	3	0	19
Pulmonary decortication.....	0	0	0	0	0	1	4	1	0	5	2	13
Thoracoplasty	38	40	37	38	36	38	33	31	9	3	8	311
Pulmonary resection.....	0	5	6	16	29	29	39	40	64	78	80	386
Total	39	46	45	54	66	70	76	79	75	89	90	729
Total patients.....	98	100	112	115	146	148	131	119	96	106	100	1271

INTRAPLEURAL PNEUMONOLYSIS

Operations to sever pleuropulmonary adhesions and thus improve the effectiveness of artificial pneumothorax treatment were beginning to increase in 1943, as there was increasing acceptance of the dictum that pneumothorax complicated by adhesions should either be improved by the severance of adhesions or abandoned in favor of some other therapeutic procedure. Pneumonolysis and/or thoracoscopy operations increased steadily to a peak in 1948 (Table 3) and then rapidly declined almost to the vanishing point. This decline was not due to the abandonment of the belief that adhesions complicating artificial pneumothorax should be severed, but rather to the abandonment, by the authors' medical colleagues, of artificial pneumothorax as a treatment of pulmonary tuberculosis. The substitution of resection for pneumothorax was due, in a large measure, to the advent of the antibacterial drugs and the subsequent lowering of the risks of excisional operations; and in lesser degree it was owing to a growing feeling on the part of both physicians and patients against pneumothorax and its complications.

THORACOPLASTY

Eleven years ago thoracoplasty had reached a fairly stable position in the treatment of pulmonary

tuberculosis. An operation performed usually in two or three stages, and tailored to the individual patient to produce the maximum collapse of the chest wall over the diseased area and still preserve the greatest possible function in the undiseased lung was the accepted goal. The number of patients upon whom the authors performed this operation remained remarkably constant over a period of six years from 1943 to 1949 (Table 3), but in 1949 the number of patients having excisional operation exceeded for the first time the number having thoracoplasty, and after that there was a rapid decline in thoracoplasty. (These data refer to thoracoplasty done as a therapeutic measure and exclude those done for space-reducing reasons with excisional operation.) This decline occurred in spite of the facts that the results of thoracoplasty were very good, and no one had clearly demonstrated that excisional operation would produce any greater improvement in the number of patients rehabilitated. But thoracoplasty is a deforming operation, even though the extent of the deformity can be kept to a minimum with proper postoperative care. Also it is, for most surgeons, a multi-stage operation. These two characteristics are of considerable importance in lessening the use of the operation.

TABLE 4.—The effect of antibacterial drugs on mortality rates among patients surgically treated

	No. of operations	—Early Mortality—		—Late Mortality—		—Total Mortality—	
		No.	Pct.	No.	Pct.	No.	Pct.
No TB antibacterial drugs—to 1947.....	56	3	5.4	6	10.7	9	16.1
Short term drug therapy—1948-1951.....	172	7	4.1	4	2.3	11	6.4
Long term drug therapy—1952-1953.....	158	3	1.9	1	0.6	4	2.6
Total.....	386	13	3.4	11	2.8	24	6.2

TABLE 5.—Changes in extent of pulmonary resection in an 11-year period

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	Total
Less than one lobe.....	0	....	....	....	....	1	....	2	3	31	19	56
One lobe.....	0	1	1	3	4	9	15	20	39	32	34	158
One lobe plus segment.....	0	....	....	....	1	1	3	6	10	9	10	40
One lung.....	0	4	5	13	24	18	21	12	12	6	17	132
Total resections.....	0	5	6	16	29	29	39	40	64	78	80	386

TABLE 6.—Resections compared to other surgical collapse procedures

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
Pulmonary resections.....	0	5	6	16	29	29	39	40	64	78	80
Surgical collapse procedures.....	89	89	96	95	114	108	86	68	27	17	14

EXTRAPLEURAL PNEUMONOLYSIS

During the 11-year period of the present study the authors have made very little use of the various extrapleural pneumonolytic procedures that require the use of air or some other foreign body to maintain the pulmonary collapse obtained by the operation. The enthusiasm in some quarters for the newer polyethylene and other plastic preparations⁵ as a plumbage material has not appreciably altered the authors' dislike for the use of foreign bodies as an aid to pulmonary collapse.

MISCELLANEOUS OPERATIONS

While the number of cases of tuberculous empyema with mixed infection has decreased over the past decade, surgical drainage was required as a part of the treatment in a few cases in the present series. Other minor procedures, such as the drainage of abscesses of the wall of the chest, excision of tuberculous sinuses, et cetera, are still being done in limited numbers.

PULMONARY RESECTION

In 1943, although the authors performed pulmonary resection in 16 cases for other diseases, no tuberculous patients were so treated—this despite the fact that one of us (J.C.J.) was co-author of one of the first publications dealing with resection in the treatment of pulmonary tuberculosis.² But during the next four years, even though there was a high morbidity and mortality connected with the operation^{1, 3, 4} an increasing number of resections was done (Table 3)—chiefly in patients in whom all other measures had failed, or who had so much

tracheobronchial disease as to make them very poor candidates for other surgical measures. But by 1948 the antibacterial drugs effective against tuberculosis were available and had so reduced the hazards of excisional operation as to bring about a rapid increase in the use of this surgical therapeutic measure (Table 4). The number of patients having resection of lobes or parts of lobes rose particularly rapidly. While the authors have not shared the enthusiasm of some investigators for the resection of the very small residual foci remaining after long continued antibacterial treatment, there was an increase, in the last three years of the period covered, in the number of patients having resection of only one or two segments of a lobe and concomitantly a decline in the use of pneumothorax (Table 5).

DISCUSSION

When the number of patients having resection is compared with the number having all other surgical procedures (Table 6), it is noteworthy that the rapid increase in the number of pulmonary resections and the accompanying decrease in other surgical procedures which was so apparent between 1947 and 1951, both leveled off in 1952 and 1953. It would appear that the transition from the thoracoplasty-pneumothorax era to the pulmonary resection era has been completed and that some predictions may be hazarded regarding the operative treatment of pulmonary tuberculosis in the immediate future.

There will no doubt continue to be a few patients who, for one reason or another, will not be suitable candidates for pulmonary resection, and in whom phrenic nerve crush, thoracoplasty or the extrapleural pneumonolysis procedures with or without

plombage, will be done, either in preparation for, or in preference to, resection. Likewise, for many years there will continue to be a certain number of "salvage" patients in whom resection will be the only effective treatment. In this category may be included patients with residual pulmonary suppurative disease resulting from tuberculous bronchitis, patients in whom collapse therapy has failed to effect a cure, patients with disease previously controlled but again become active, and patients with such extensive pulmonary destruction that no other measure will be effective.

There will be increasing use of bilateral resection, or of resection combined with some other surgical measure in treating some of these "salvage" patients. In this respect, pulmonary or cardiopulmonary function studies made before and in the interval between multiple procedures will be of great help in selecting patients suitable for surgical intervention and in determining the type and amount of operation to be done. And there will be a certain number of patients who will continue to have tubercle bacilli in the sputum and/or x-ray evidence of cavitory disease after long-term antibacterial drug therapy, and for whom excisional operation is unquestionably indicated. The future treatment of small, residual caseous, caseofibrotic or upper lobe bronchiectatic disease, however, is quite uncertain. Undoubtedly there

is a tendency at present away from the resection of such small lesions, and toward ever longer drug therapy. But whether that trend will continue or will be reversed will depend upon many things. Of great importance will be the results of careful, long term follow-up studies of both the excisional and the non-excisional groups of patients.

At present it would appear that the wisest course to follow is to study each patient, rather than to apply to his case a categorical list of indications for resection. Each patient should have the benefit of a careful appraisal by a team composed of internist, pathologist and surgeon before a decision is reached regarding a recommendation for surgical intervention.

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Office Treatment of Ambulatory Schizophrenics

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SCHIZOPHRENIA appears to be one of the major medical problems facing physicians in the United States. Psychotherapy of schizophrenic persons has increased considerably in the past ten to fifteen years, and since treatment of this kind has proven valuable in hospital settings, increasing attempts are being made to carry out psychotherapy for schizophrenic patients who are not hospitalized. It has come to be recognized that in many cases severe regressive phenomena can be prevented in psychotic persons if they can be kept out of the hospital. Especially if a patient can work and manifest some semblance of social living, his self-esteem is bolstered. There is a not unimportant financial aspect as well.

Probably no facet of psychiatric practice demands more of a therapist, in terms of ability and patience, than treatment of schizophrenic persons in an office, for he lacks the support of colleagues and staff that he has in a mental hospital; he bears heavy responsibility for a patient who may be, or may become, a danger to himself and to others; and, last but not least, he must withstand the anxious interference of relatives and occasionally of the community. Especially in regard to acting out, hostility, and unutterable demands by the patient, the therapist's inscrutability may undergo severe trial. Small wonder, then, that many psychiatrists regard the whole procedure of psychotherapy with ambulatory schizophrenic patients as an unlikely business, and all too readily become discouraged. Perhaps discouragement can be forfended, however, by consideration and discussion of some important practical matters that, if left unattended, may result in subsequent difficulty.

The first and foremost such matter is the therapist's awareness of whether or not he really wishes to undertake treatment of a given patient. If one has the opportunity to supervise the therapy of schizophrenics by others, he may discover that occasionally the venture is begun with unnoticed reluctance on the part of the therapist. There may be, for instance, evidence of a peculiar rigidity and the need to hold fast to a set schedule that cherishes the psychiatrist's time. Or there may be a coldness during unasked for phone calls by the patient and a need to make it overly clear to the patient that his "demands will not be met here."

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• There are many advantages of treating schizophrenic patients outside a hospital setting, if it can be managed. These advantages include the lesser pecuniary cost to the family and patient and the maintenance of the patient's self-esteem by his continued life in the community, particularly if he can be kept at some sort of gainful occupation. There is also a tendency for schizophrenic persons to increase their loss of contact with reality if, as in a hospital, they are taken care of and not expected to assume any responsibility for themselves.

The office treatment of a schizophrenic person entails special problems not only of therapy but of dealing with relatives and the community. It is felt that attention to these matters results in the successful social restoration of patients who formerly would have been thought too ill to remain outside a hospital setting.

Although this is among the most demanding work a psychiatrist can engage in, the rewards are great.

Perhaps under pressure from the patient's family or from colleagues, and with an eye to the prestige value of "handling anything that comes along," the therapist may begin treatment when he is secretly reluctant to do so. The important thing in treatment of schizophrenic patients in the office is that the psychiatrist must be able to enter into an agreement with himself whereby he recognizes there will be unusual and unscheduled demands on his time and patience, and be disposed to pay the price. It is essential that the psychiatrist feel all arrangements, including the financial ones, are to his satisfaction before he undertakes treatment.

The therapist's evaluation of the patient's difficulties will naturally play a part in his decision as to whether to undertake treatment or not. However, evaluation of "how sick the patient is," of "ego strength" and such matters is highly speculative, especially in light of the present-day diagnostic scheme. The estimate is perhaps as much a matter of experience and empathy for the patient as anything else. Sometimes psychological tests may be helpful. An illustrative example occurred in the case of a 40-year-old man who was referred by an internist as having a problem in adjustment. The patient

had had a position that required a good deal of foreign travel, and apparently had symptoms as a result of "settling down." He was well dressed, intelligent and prepossessing; and although he answered questions readily, somehow he did not seem to be adequately communicative. After three interviews, there was still a question about the extent of the patient's difficulties and a Rorschach test was done. It revealed a rather well controlled psychogram, but the content seemed to indicate that the patient was psychotic with crumbling control. In the next interview, a more alert and active approach disclosed that the patient felt there was a microphone hidden in the room and had decided on its exact location.

Once it has been decided the patient is psychotic and that psychotherapy should be begun, a number of practical decisions arise.

The frequency of interviews requires careful thought. If the patient is one who is felt to require strong support, it might be decided to see him three or more times a week at the start. Such frequency may also curb harmful "acting out" and lessen suicidal risk. However, it is also an invitation for the patient to become overdependent on the therapist, and such involvement may require years to straighten out. If the therapist is prepared to do intensive long-term psychotherapy, the involvement may do no harm; if not, it may invite a disastrous outcome if the frequency of interviews is cut after an initial supportive period. For example, one patient was greatly concerned about the cost of treatment. Since she was being interviewed three times a week she was asked if she would feel less preoccupied with finances if she cut down to twice a week. This apparently simple, obvious suggestion brought about a week of extremely psychotic behavior. On another occasion she had come in for an extra appointment and it had been agreed that she would skip the next regular meeting. The night before the meeting that she was to miss, she had an extremely frightening dream in which she saw herself among a group of extremely sick patients in a mental hospital and all of them were being treated by the psychiatrist except herself. She felt utterly lost and alone, and was quite depressed for two days.

In general it is desirable for less experienced therapists to see patients once or perhaps twice a week; and if therapy is begun along more ambitious lines, it is necessary that the psychiatrist expect to maintain the pace for some while. Naturally, the patient's financial resources have to be determined before any decision as to frequency can be made.

Another practical matter is: Who else should be concerned in the treatment? Some patients are best dealt with if another physician serves as an administrator. The other physician is not only someone the patient can turn to when the therapist is absent,

but can handle medication, deal with questions referable to the patient's job or family, and serve as someone the patient can use to let the therapist know indirectly how things are going.

Then, as to the family: Should they be brought into the treatment, used for history-taking purposes, given instructions as to behavior toward the patient, and kept *au courant* with what goes on in psychotherapy? This again is a matter worthy of thought. If the patient seems able to get along by himself, and especially if he is not financially dependent on his family, it may be expeditious to enforce the idea that this is his treatment and his alone. In these circumstances the patient may feel free to respond to the psychiatrist's confidence in him, and not to involve the therapist in the hatred toward the family. On the other hand, if the success of the treatment will depend on the family's humor, it is simply logical to become an exponent of tact and diplomacy. Should the possibility exist of getting a family member to talk things over with another therapist, it should be seized with alacrity. There is another point here that is often overlooked. The patient's illness has a certain utility as far as the interrelationships within his particular family are concerned. If he starts to get well, all sorts of surprising events may occur in those nearest and dearest to him. If, for example, the therapist has reason to believe that a psychotic husband is integrated in an intense mutually hostile and dependent relationship to his wife, provision must be made for disruptive changes in her as the patient improves. Occasionally, the psychiatrist must insist that the patient cannot undertake treatment unless the other person who is in significant relationship with the patient is also undergoing therapy. Failure to do so may, in extreme cases, lead to suicide, psychosis or severe psychosomatic disorders arising in the spouse or relative.

Another practical consideration concerns how treatment should commence. One might take an exhaustive history, let the patient "free associate," or attempt to discover the precipitating causes of the present difficulty. Here again, the principle of flexibility must apply. There seems little point to questioning the patient about his childhood if the present-day world is falling in ruins about him. A history is useful if it can be obtained with a minimum of inconvenience and anxiety, but perhaps too often a therapist feels a need to get something into the record that will protect him and will serve as a source of data for a letter to the referring physician. Many psychotic persons will state that in retrospect they recognize that they inadvertently stated the central problem of their illness in the first few interviews. In other words it is well to commence by listening and by asking simple questions that clarify the patient's present difficulties in living. If this can be done against a background of knowledge of his

past, the listening and questioning may be more meaningful.

A useful frame of reference to guide the therapist's activity is the realization that the patient has missed certain valuable experiences in the growing-up period and has lacked, therefore, the opportunity to consensually validate these experiences. He does not know the relief and joy that can occur in the chum relationship by finding out that the chum has had similar experiences. Certain of these "lacks" cannot be mentioned to the psychiatrist either because they are not apparent to the patient as hiatuses in his maturation or because he feels so foolish about them and so unique. Therefore the psychiatrist may have to guess on the basis of his own experience and knowledge of the culture in which we live in order to fill in the blanks for the patient. For example, a patient was walking downtown and was whistled at by a young woman who passed in a car. He had quite a striking reaction to the experience and walked back around the block to see if she was possibly interested in picking him up only to find that she had disappeared. The patient spoke of his frustration and uneasiness in relation to the incident and then there was a rather uncomfortable pause. The psychiatrist mentioned that it would not be unusual for masturbatory ideas to occur following such an exciting but frustrating incident; and the patient, very relieved, expressed agreement—and amazement that his feeling were by no means unique. Intervention of this kind is more than simply emotional support because it also aids the patient's maturation. He did not have a chance to discuss masturbation with his peers during his early adolescence.

There is another possible aid for the therapist in understanding experiences the patient is relating; namely, hearing what is said in terms of actual present-day experience and not initially as a projection. This is not to say that past experience is not coloring the present, nor that the patient is not reliving an old story so that he has gotten himself into the present situation because of the past, but it is to say that one's approach can be unacceptable to the patient if the reality of the present-day situation is not taken into account. Thus a young schizophrenic man was relating his concern and feeling of responsibility toward a girl he was dating. The therapist, rather than jumping at what he knew to be true—namely, that the patient had a tendency to feel overwhelmingly responsible for women as a way of integrating with them—asked in what way the girl might be making the patient feel responsible. The patient confessed that the girl had a suicidal preoccupation and had pledged him to silence about it, but that bearing the responsibility made him uneasy. He broke into a real grin following the discussion and expressed gratitude that he was not treated as if he were simply putting ideas into a situation in

which they did not belong. He described an experience that had happened on several occasions when he was hospitalized: A psychiatrist would urge him to talk, but then point out how unreal what he said was.

It is also useful in therapy if the therapist will make a practice of discussing dependence before hostility. The patient mentioned in the preceding paragraph had a serious problem because of his passive resistance to school work. Rather than taking it up simply as a "spite reaction," the therapist inquired into the patient's earliest school experiences. After some hours of work, it was established that the original reluctance toward school was related to a fear that his mother was going to leave when she sent him to school and that she would not be there when he got back. When he was at school there was such a horrible preoccupation with what might be going on at home that it became impossible for him to keep up with his fellows even though he was quite bright. The helplessness was in part controlled by seeing himself as spiteful, that is, powerful in some way.

Many of the difficulties and technical problems mentioned were encountered in a female patient who had been schizophrenic for a year before psychotherapy was undertaken. Just before she was observed by the author, she had fled from another city a great distance away under the impelling delusion that her life was in danger there. She was not hospitalized because she had three children and it was considered of great importance to her that she somehow continue to care for them. She had been a Cinderella all her life, and scullery work and caring for the children were an avocation as well as a culturally prescribed behavior. In addition, she had relatives in the area who would undertake some of the responsibility for looking after her. Psychotherapy was begun at a frequency of three times a week, and it was felt that if a strong rapport were established with her it might be possible to attack rather directly some of the processes responsible for her extreme guilt and suicidal urges, and at the same time to increase, if even slightly, the satisfactions in her daily living. The delusions, hallucinations and other evidences of psychotic thinking were rarely dealt with, since it was felt that a change in her living would result in the minimizing of the need to be psychotic. The exception to the above was that evidence of "craziness" in relation to the person of the therapist was dealt with firmly, often sarcastically and, on occasion, histrionically.

One of the sources of support that was deliberately exploited was the need of the children for her. They were no easy crew, in themselves, but her mastery of even simple practical problems in day to day living aided her Lilliputian self-esteem. When, for example, some months after therapy had begun, she

announced that she was shipping the children off to their father, since she was such a terrible mother, it was possible for the therapist to intervene with the fervent comment: "You'd really like to fix the so-and-so, wouldn't you?" Time does not permit further disclosure of events in this case. Suffice to say that the patient was of a type the author once would not have considered treatable outside a hospital setting.

The Palo Alto Clinic.

Discussion by NORMAN Q. BRILL, M.D., Los Angeles

Dr. Jackson has touched on an extremely important subject. The treatment of schizophrenics with psychotherapy outside a hospital setting is a relatively new development in medical practice. It was not too long ago that hospitalization was routine and treatment little more than custodial care. Primarily it is the increased understanding of the psychodynamics involved in the development of a schizophrenic reaction that has made possible the treatment of such patients on an outpatient basis. Bizarre behavior and delusions and hallucinations are no longer looked upon as being just "peculiar" but as important clues or indications of what has been going on in the patient's unconscious.

Dr. Jackson has quite properly emphasized the fact that severe regressive phenomena can be avoided through the use of treatment without hospitalization especially where hospitalization involves merely a goal of socialization of the patient without the development of any real insight into the nature and causes of his disorder. This reference to severity of disorder points up the need in any discussion of the treatment of schizophrenia to be specific about the kind of patient one has in mind. There must be some who, listening to Dr. Jackson's paper, wondered if he were referring to severely disturbed, noisy, hallucinated and often dangerous patients or to the relatively non-disturbed patient whose behavior is not too bizarre, who is perhaps somewhat confused or deluded but who to some extent is able to get along outside a hospital and in some instances even able to work. It is of interest that some of the early patients whom Freud treated in the early days of psychoanalysis would by present standards be called psychotic yet in those days were classified as suffering from neuroses. Dr. Jackson touched on the need to evaluate the patient's difficulties before undertaking treatment of him; but to insure against any misunderstanding a clinical description of suitable types of patients would be helpful. With some schizophrenics who are not too sick, outpatient treatment may be undertaken without the prospect of having unusual and unscheduled demands being made on the therapist. The schizophrenic who is sufficiently well motivated to seek continuing treatment usually has enough ego functioning to permit the interpretation of his oral strivings in lieu of having them satisfied by the therapist.

Dr. Jackson very properly points out that the therapist's evaluation of the patient's difficulties necessarily plays a part in his deciding about undertaking outpatient treatment. He properly emphasizes that the ability of the therapist to make such examinations is a matter of experience and understanding.

Dr. Jackson indicates that psychological tests may be helpful in determining a patient's suitability for outpatient treatment. In my experience this has been the exception rather than the rule. The experienced therapist is one who ordinarily can evaluate the degree of illness from the initial interviews. I have seen instances in which results of a Rorschach test were reported by a psychologist as being indicative of a schizophrenic process when clinically the patient was not schizophrenic. It is important to understand that the projective test reveals information about what is going on in the patient underneath the surface with ordinary defenses not operating. It may reveal a great deal of underlying psychopathology which the patient is able to keep under control—a fact which is important in itself and not to be minimized.

As with any other kind of patient, in treating a schizophrenic, it is necessary to define clearly the goal of treatment. Once decision has been made on supportive versus insight-producing therapy, the matter of frequency of visits is easily decided upon. It also serves to avoid changes in scheduling of visits which frequently result from shifting or unclear goals.

It is unfortunate that there is the problem of finances. Cutting visits down because the patient cannot afford so many visits leaves the psychiatrist open to criticism by the public as well as the medical profession. It should be possible to look into the patient's financial situation early in the treatment situation so that this may be considered from the start in outlining the goal of treatment. The therapist should be prepared to reduce his fee if the patient cannot afford to come as often as treatment demands just as readily as he offers to cut down on the number of visits.

Dr. Jackson has suggested that the therapist collaborate with another physician who serves as an administrator. I would wonder about the nature of this other physician and the extent of his training and understanding. In some psychiatric hospitals therapeutic functions are separated from administrative. For example, at Chestnut Lodge in Rockville, Maryland, each patient has a ward physician who takes care of such matters as passes, assignment of rooms, and other things which relate to the hospital. A therapist is assigned in addition. He makes no administrative decisions and merely deals with the patient and his emotional reactions. In both instances at Chestnut Lodge the physician is a psychiatrist, and I wonder if Dr. Jackson had in mind that "the other physician" who would serve as administrator be a psychiatrist too.

The problem of the family of the patient which Dr. Jackson has stressed is an important one. Frequently it is possible for the patient himself, rather

than the physician, to induce a member of the family to obtain treatment. It can come about by helping the patient to be objective about his family, to see that they have emotional problems too, like himself. Once the patient sees this, he himself is likely to insist that the member of the family he is most concerned with also get help. Usually the patient has been expecting his family to fulfill some impossible phantasy and been repeatedly disappointed, hurt and angry. When he learns that he cannot expect anything different he is likely to take a different tack. Experienced therapists, as Dr. Jackson has pointed out, realize the extent to which two people may adjust to each other through disturbed relationships and how a change in one through therapy will produce serious reverberations in the other. Many times the second member of the family will become upset and consult the patient's therapist, and it is at this point that the therapist can often suggest psychiatric help.

In the treatment of schizophrenics it is helpful to realize that the schizophrenic is angry and hostile and to varying degrees has withdrawn into a narcissistic shell—into an unreal world of fantasy to avoid being hurt and disappointed. The schizophrenic reaction is a defense. Because of it the patient has missed the ordinary experiences that others usually have, as Dr. Jackson pointed out. Another aspect to be remembered and to be used as a guide in treatment is the feeling of guilt that accompanies the patient's hostility. Also to be borne in mind is that the give-and-take experiences which the average individual encounters in the process of growing up, nourish and enlarge the ego. This is something that

the schizophrenic has not had enough of either because of his own early withdrawal or because of repeated frustrations in his early attempts to give and take.

I would certainly subscribe to Dr. Jackson's emphasis on the need to deal first with upsetting reality situations; and I was particularly impressed, from the examples which he gave, of his intuitive ability to sense the presence of such situations in his patients. With regard to the point of discussing dependence before hostility, I would suggest the following: Usually they go together. If dependence is pointed out before hostility, it may be interpreted as criticism. In my experience it has been helpful to recognize the hostility first and its relationship to the patient's dependent needs, which then can in turn be related to the underlying fear which perpetuates it.

To the extent that one encourages patients to seek greater satisfactions in daily living and also tries to bring about environmental changes for the patient, one is playing the role of a parent. Positive attachments which may develop cannot then be totally explained as transference, nor can the negative feelings which inevitably develop later on. The patient who has been carefully induced into giving up a psychotic reaction, not infrequently will regress all the way as a result of some unexpected frustration at the hands of the therapist which is interpreted by the patient as rejection. Like a small child, the patient projects his own hostility onto the therapist, and it is the resolution of this basic problem that is perhaps the most difficult task to achieve in treating such patients.

Use of Radioactive Chromic Phosphate in Pleural Effusions

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THERE ARE FEW CONDITIONS resulting from neoplastic processes that cause so much discomfort to the patient as the formation of pleural effusions and ascites. Often in the treatment of malignant disease, the relief of pain and discomfort is the best that can be achieved. Any new material or method that helps to do this is a valuable addition.

Radioactive chromic phosphate is a new material that is used to control effusions and ascites in the same fashion as is radioactive colloidal gold. The results with chromic phosphate are comparable to those with gold. The chromic phosphate has some advantages over gold, and a few disadvantages.

Radioactive gold for the control of ascites was first used by Muller, who reported his first work with it in 1949.⁷ He had first used a radioactive isotope for this purpose in 1945. At that time he employed Zn_{63} (cyclotron prepared).⁸

In 1953, Seaman, Sherman and Bonebrake¹¹ reviewed the several reports that had appeared by then and found that favorable results varied from 30 per cent to 90 per cent in cases of malignant effusion in which radioactive gold was used. In their own series, 50 per cent of the patients treated had some measure of palliation. It is evident from these figures that the gold has value as an agent for palliation.

Since most (90 per cent) of the ionizing radiation from Au_{198} is due to the beta particles emitted, the gamma component only complicates the safety factors. The dosage scale for gold runs from 25 to 100 millicuries instilled into the pleural space, and 50 to 200 millicuries into the peritoneal cavity, at one administration. The equipment used for instillation is shown in Figure 1. The equipment and protection required, although not too complex or difficult, becomes much simpler when radioactive chromic phosphate is employed (Figure 2).

The dosage range for chromic phosphate runs between 6 and 9 millicuries for pleural effusions and between 9 and 12 millicuries for ascites.

The radioactivity of gold¹⁹⁸ consists of an effective beta particle of 0.98 microvolts which has a maximum range of 3.8 mm. and a half path* of approxi-

• Radioactive chromic phosphate was chosen in place of radioactive gold for control of pleural effusions and ascites.

The chromic phosphate has no gamma radiation to complicate the health physics. Its 14.3 day half-life in contrast to that of 2.69 days for gold makes possible the use of much smaller total dosages. There were no untoward results from the use of this material. The results in the series here reported upon compare favorably with those reported for gold¹⁹⁸.

mately 0.4 mm. in tissue, plus a gamma ray of 0.41 microvolts. After the injection, the patient becomes a source of radiation. It has been calculated that when 100 millicuries is placed in a peritoneal cavity, there is emitted from the patient 50 milliroentgens per hour at a distance of five feet. It is necessary, therefore, to keep such a patient at least six feet from other patients in order to stay within the maximum permissible daily radiation exposure; and a nurse, for example, may be within two feet of the patient for no more than 20 minutes each day.^{2, 9}

The ionizing effect of radioactive chromic phosphate is due to the beta rays of P^{32} which have a maximum energy of 1.712 million electron volts. The energies of the beta rays average approximately 600,000 electron volts, but energies as high as 1,800,000 electron volts have been reported. In animal tissues, the beta ray has an average penetration of 2 mm. with a maximum of 7 mm. reported. The properties of and methods of preparation for the radioactive chromic phosphate are given herewith:

(a) Average particle size is 4 microns, with a range of 0.5 to 10 microns.

(b) The chromic phosphate is prepared to contain 1.0 millicuries P^{32} per ml. in sterile and pyrogen-free saline solution. The preparation contains approximately 3.5 mg. inert chromic phosphate (or 0.77 mg. P^{31}) per millicurie of radioactive phosphorus. Administration of 8 millicuries P^{32} is therefore also associated with the injection of 28 mg. of $CrPO_4$, or less than 0.5 mg. of $CrPO_4$ per kilogram of body weight. No toxic effects have ever been reported for the inactive chemical and the author would estimate the safety index to be in excess of 100. The method of preparation is as follows: To

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*Half the distance that a beta particle would penetrate in tissue before loss of all its energy.

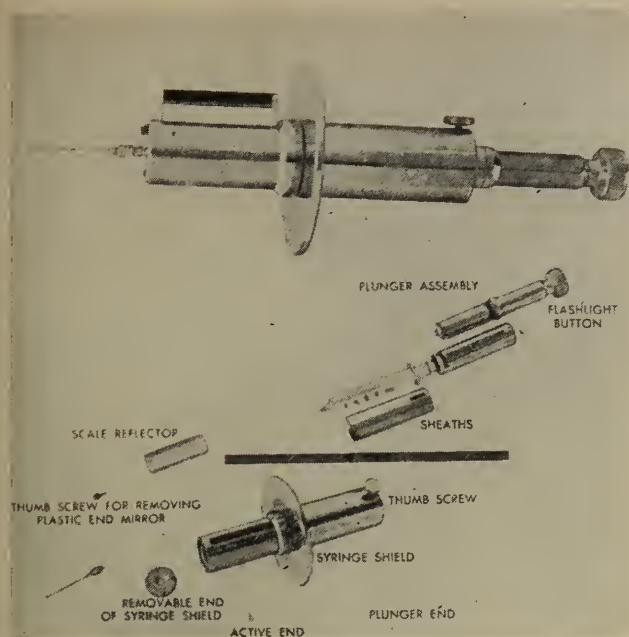


Figure 1.—Equipment used for instillation of gold¹⁹⁸.



Figure 2.—Equipment needed for injection of radioactive chromic phosphate. The receptacle at lower left is a lead-lined glass bottle into which the bottle of chromic phosphate is placed.

the colloidal suspension of radioactive chromic phosphate is prepared by adding an equimolecular amount of chromic nitrate to radioactive phosphorus containing phosphoric acid carrier. The solution is evaporated to dryness and heated to 550° C. Pyrogen-free saline solution and pyrex glass beads are added and the preparation sterilized. The particles are reduced in size by shaking for 24 to 36 hours and the material is resterilized.^{5, 6}

(c) Amorphous chromic phosphate is insoluble and appears to be biochemically inert. It therefore remains in situ, except for mechanical transport.

TABLE 1.—Proportion of dose of P^{32} eliminated in urine and feces, as reported by Neukomm and co-workers¹⁰

Number of days after injection	Percent of dose in urine and feces
5	0.36
12	0.11
19	0.05
26	0.04

The evidence to date indicates that such relocation takes place to a minor degree only, even with particles of less than one micron.³

The biological fate of the radioactive chromic phosphate has not been determined in all its phases.

Neukomm and co-workers¹⁰ noted that when intratumoral injections of this material were used in the treatment of spontaneous mammary cancer in rats, part of the P^{32} was eliminated in the urine and feces in the proportions shown in Table 1.

It was assumed then that radioactive chromic phosphate, being insoluble and possessing only a beta component, could be used to treat serous effusions in the same manner as radioactive gold. Since the chromic phosphate had no gamma component, the need to protect personnel and patients from gamma radiation would be obviated and handling of the material and health physics would be simplified.

In the present series of cases, no quantitative determinations of uptake in the reticuloendothelial system were done. Nor were excretion studies carried out. However, no untoward effects or undesirable systemic effects were noted from the instillation of as much as 16 millicuries of radioactive chromic phosphate. The authors do not have proof that the material remains in situ, but the observations certainly suggest that it does, and that the ionizing effect is spent where the material comes into immediate contact with tumor cells in fluid and on exposed surfaces.

The technique employed for injection of radioactive chromic phosphate into the pleural space is as follows:

Thoracentesis is done and as much of the free fluid present as it is possible to remove is withdrawn. The suction apparatus is then detached from the needle and all equipment and drapes are removed from the field. The bottle containing the radioactive material is thoroughly shaken to obtain a uniform distribution of the particles. The bottle contains multiple small glass beads to facilitate this. The rubber stopper is cleaned with alcohol and the material is aspirated into a 10 cc. syringe. The syringe is detached from the aspirating needle and inserted into a thoracentesis needle and injection made into the free pleural space. Then the needle and syringe are withdrawn. The area is covered with 2 x 2 or 4 x 4 gauze pad and fastened with adhesive tape. The needle, barrel and plunger are separated and

wrapped in gauze and placed in a bag marked "contaminated." All contaminated linens are placed in bags and so marked, as are the rubber gloves worn by the physician throughout the procedure. The physician's hands are monitored for evidence of contamination. If activity is present on the hands, they are thoroughly and repeatedly washed in a detergent solution. All contaminated equipment and linen are removed to the "hot" laboratory where syringes and gloves are washed and then stored with the linens until the radioactive contamination has been spent and monitoring proves them "cold." This requires six to eight weeks, after which they may be returned to general use. Disposable materials are stored in a large can kept in an isolated area until sufficient time has elapsed for radioactive decay; then they may be burned.

The technique for instillation of the material into the abdominal cavity is essentially similar to that used for the chest, except that in some cases the material is diluted up to a volume of 50 or 100 cc. and instilled through polyethylene tubing with an outside dimension of 0.47 mm. The end of the tubing, which is perforated, is inserted into the peritoneal cavity through a No. 13 needle. Approximately 8 inches of the perforated end is passed into the abdomen. It is hoped by this means to obtain a better distribution of the radioactive material and to prevent pocketing.

From the foregoing it is evident that the chromic phosphate is simpler to use than Au^{198} . The danger to personnel and patients is lessened by the absence of a gamma component and by the smaller dosage requirements.

The means whereby the formation of fluid is suppressed is probably explained by the work of Goldie and co-workers.⁴ They proved that intracavitary injections of radioactive gold have a lethal effect on free floating cells of sarcoma (S-37 and S-180). And the group at the Oak Ridge Institute for Nuclear Studies¹ noted that the presence of gold in serous cavities resulted in the disappearance of tumor cells from the fluid.

At the City of Hope, 25 cases of pleural effusion and 12 cases of ascites were treated.

The work was started in November 1952 and is continuing. Of the 25 cases of pleural effusion 17 were due to primary pulmonary neoplasms and eight were due to metastasis from primary lesions located outside the chest. Four of these were primary breast cancer, one testicular neoplasm, one kidney tumor, one rectal carcinoma and one ovarian carcinoma with both pleural effusion and ascites.

The results in the cases of pleural effusion are shown in Table 2.

The seven cases in which the treatment was ineffective included one in which there was both pleural

TABLE 2.—Pleural effusions—Results of treatment

Total number of patients treated.....	25
Fluid controlled—	
1 month.....	4
2 months.....	4
3 months.....	5
4 months.....	1
6 months.....	2
12 months.....	1
15 months.....	1
Failures.....	7 (28%)

TABLE 3.—Ascites—Results of treatment

Total number of patients treated.....	12
Free of fluid—	
1 month.....	4
2 months.....	2
3 months.....	1
4 months.....	1
10 months.....	1
Failures.....	3 (25%)

effusion and ascites from an ovarian carcinoma. The ascites was controlled for a period of ten months by two instillations of chromic phosphate of 5 millicuries each given two months apart. Also included was one patient who had had pneumonectomy one week before instillation of 8 millicuries of radioactive chromic phosphate into the chest. Large mediastinal nodes were present and an effusion developed. Two weeks after the material was placed in the chest, a bronchopleural fistula developed. The health physics complications arising therefrom were numerous.

In the 12 cases of ascites treated, the cause of the condition was ovarian carcinoma in nine cases, and in one case of each primary breast carcinoma, carcinoma of the head of the pancreas and carcinomatosis of unknown origin. The results of treatment are shown in Table 3.

REPORTS OF TYPICAL CASES

Following are brief reports of typical cases:

CASE 1. A man 50 years of age had thoracotomy on November 24, 1953. One thousand cubic centimeters of clear yellow fluid was present and large hilar nodes were noted. A 6 cm. mass was present in the lingula of the left lung, which was adherent to the pericardium. A specimen was taken from the mass and the tissue removed was anaplastic epidermoid carcinoma. As the lesion was felt to be inoperable the chest was closed. On November 30, 1953, 9 millicuries of radioactive chromic phosphate was placed in the left side of the chest. About 300 cc. of fluid was present at the time. The patient remained comfortable and free of fluid until early in

February 1954. He was readmitted on February 12, 1954. Eight hundred cubic centimeters of clear fluid was aspirated from the left side of the chest and 8 millicuries of radioactive chromic phosphate was placed in the left pleural space. Fluid did not form thereafter.

CASE 2. A 58-year-old woman had a carcinoma of the breast removed in November 1951. In November 1952, left pleural effusion developed. Tumor cells were found in the effused fluid. On December 5, 1952, 8 millicuries of radioactive chromic phosphate was placed in the left chest cavity. The patient remained comfortable until July 1953, when fluid reaccumulated. She was then lost to follow-up and it was learned that she died on January 16, 1954.

CASE 3. A woman 57 years of age had laparotomy in March 1950 and bilateral ovarian carcinoma with peritoneal implants was observed. Postoperative radiation was administered. In February 1952 ascites developed, for which 5 millicuries of radioactive chromic phosphate was instilled into the peritoneal cavity. This was repeated in February 1953 for recurrence. The patient remained free of ascites until she died in December 1953. In November 1953, a pleural effusion developed, for which 8 millicuries of radioactive chromic phosphate was placed in the chest. Fluid recurred in the chest before the patient died.

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Recent Advances in Retrolental Fibroplasia

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THE SUBJECT OF RETROLENTAL FIBROPLASIA has gone through many stages of confusion since it was first described by Terry²⁹⁻³⁴ in 1942. The work of Reese¹⁹⁻²³ and Owens and Owens^{13, 14, 15} in particular did much to clarify the picture. As a result of their work a new classification based on a better understanding of the disease can be presented. The following classification was proposed by the Joint Committee on Retrolental Fibroplasia.¹⁰ This classification comprises two main divisions: (1) the *acute* and (2) the *cicatricial* phase, or the phase in which there is no further active progression and in which scarring is the predominant feature. In turn each of these divisions is subdivided into five categories.

Stages of Retrolental Fibroplasia in the Active Phase:

STAGE I.—*Dilatation and tortuosity of retinal vessels.* Hemorrhages may or may not be present. Early neovascularization especially in the extreme periphery of the visible fundus may be present.

STAGE II.—*Stage I plus neovascularization and some peripheral retinal clouding.* Hemorrhages are usually present. Vitreous clouding may or may not be present. Spontaneous regression may occur.

STAGE III.—*Stage II plus retinal detachment in the periphery of the fundus.* Spontaneous regression unlikely.

STAGE IV.—*Hemispheric or circumferential retinal detachment.* Elevation of the retina over a large area, but still with some retina in position.

STAGE V.—*Complete retinal detachment.*

Grades of Retrolental Fibroplasia in the Cicatricial Phase:

GRADE I.—*Small mass of opaque tissue in periphery of the fundus without visible retinal detachment.* The fundus may have a pale appearance. The blood vessels may be attenuated.

GRADE II.—*Larger mass of opaque tissue in periphery of the fundus with some localized retinal detachment.* The disc is distorted by traction toward the side of the tissue, which is usually temporally. Cases ending in Grade I or II have useful vision.

GRADE III.—*Larger mass of opaque tissue in*

• *Retrolental fibroplasia is the most common cause of preschool blindness. Changes identical to retrolental fibroplasia in humans have been produced in animals by exposing them to high oxygen concentration.*

Oxygen should be ordered for premature infants in a careful and precise manner. Concentrations of over 40 per cent should be avoided whenever possible. Withdrawal to air should be a gradual process.

periphery incorporating a retinal fold which extends to the disc. Visual acuity varies from 5/200 to 20/50.

GRADE IV.—*Retrolental tissue covering part of pupillary area.* Small area of attached retina may still be visible or only a red reflex over a sector of the fundus may be seen.

GRADE V.—*Retrolental tissue covering entire pupillary area.* No fundus reflex present.

In clinical and experimental fields, medical researchers persevere in attempting to determine the cause of retrolental fibroplasia and to seek adequate measures for preventing it. However, it remains one of the most challenging problems in ophthalmology today. Seventy per cent of the blindness in 500 preschool children in California is owing to retrolental fibroplasia. The fact that in 50 per cent to 75 per cent of cases¹⁶ regression occurs spontaneously makes evaluation of treatment especially difficult. Recent research still implicates retinal anoxia owing to excessive oxygen or to other causes as the most probable etiological factor.

As early as 1949, Kinsey and Zacharias¹¹ showed that there might be a significant correlation between retrolental fibroplasia and the giving of oxygen.

Two years later, Campbell³ of Australia published an article advancing the theory that retrolental fibroplasia might be due to the toxic effect of excessive oxygen. Her investigation covered the years 1948, 1949, 1950, and the results published deal with 181 surviving premature infants who at birth weighed from 1 pound 7 ounces to 3 pounds 8 ounces. There were 27 cases of retrolental fibroplasia. Campbell noted that of 123 infants given high-oxygen therapy 23 cases in 123 (oxygen given prophylactically as well as for cyanosis) 23 or 18.7 per cent had retrolental fibroplasia, whereas in the moderate-oxygen group the incidence was four cases in 58 infants (7 per cent).

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Other investigators in various parts of the world carried on like experiments and reported similar results. Ryan,²⁵ also of Australia, wrote a paper supporting Campbell's observations.

Crosse and Evans⁴ of Birmingham, England, also expressed the opinion that the real source of this disease lies in the more widespread and prolonged use of a high concentration of oxygen in the early life of premature infants of low birth weight—4 pounds or less. In support of this theory they traced the history and course of the disease in England.

A careful statistical study by Patz, Hoeck and De La Cruz¹⁷ of Washington, D. C., published in September 1952 also pointed to high oxygen tension as a cause of retrolental fibroplasia. The study was done at Gallinger Municipal Hospital and all babies weighing under 3.5 pounds were placed in one of two groups in the nursery.

Group I comprised babies maintained in high oxygen (65 per cent to 70 per cent) for four to seven weeks. Group II included those who received lower oxygen (under 40 per cent) concentrations. The nursery routine was otherwise identical. The results of the study of 65 cases are shown in Table 1.

Goldman and Tobler⁶ considered high and prolonged oxygen concentration important factors in retrolental fibroplasia. Locke¹² said that the disease is directly related to hyperoxia rather than to any secondary anoxia induced by oxygen withdrawal.

Perhaps no one has made a more comprehensive study of this mysterious disease than Szweczyk²⁶ who came out with the thesis that anoxia plays a major role in causing it and who strongly emphasized rapid withdrawal from high oxygen concentration as a very important causative factor. He first published a preliminary report of his findings in December 1951. In a later report²⁷ he cited the following preventive measures:

Premature infants weighing over 4 pounds and showing no sign of anoxia are not placed in oxygen. The fundi of the eyes are carefully watched and if signs of anoxia retinopathy develop, the babies are placed in incubators at a relatively low concentration of oxygen (40 to 45 per cent).

Premature infants weighing under 4 pounds are placed in an oxygen atmosphere of about 45 per cent or lower if possible. If signs of progression appear, they are returned to an oxygen concentration of 45 per cent.

From his observations, Szweczyk²⁸ deduced the theory of "relative hypoxia" as the etiological factor for retrolental fibroplasia and he offered the term *hypoxic retinopathy* as preferable to *retrolental fibroplasia*.

The work of Ingalls, Tedeschi, and Halpern⁹ gave support to the theory of anoxia as a causative factor; they observed that anoxia in a pregnant mouse is

TABLE 1.—Relation of retrolental fibroplasia to degree of oxygen concentration used for premature infants¹⁰

Oxygen levels	High	Low
Total number of infants.....	28	37
Normal eye grounds.....	11	31
Retrolental fibroplasia stages:		
I.....	3	4
II.....	7	2
III.....	2	0
IV.....	5	0
Per cent with disease.....	53.5	16.2

capable of producing malformations in the eye of the offspring.

Bedrossian, Carmichael and Ritter,² who reported clinical studies and further observations made at the Philadelphia General Hospital, stressed the point that many apparently conflicting observations are only variants of similar processes and not contradictory at all. They concluded: "Retinopathy of prematurity is an anoxic disease rather than an oxygen-toxic one. Although the excessive use of oxygen supplements predisposes to the disease, it is usually the rapid withdrawal of these supplements that precipitates the appearance of retinal changes."

Investigators are also weighing carefully the effects of high electrolyte diet with repeated blood transfusions and considering the possibility of a correlation between them and retrolental fibroplasia. Hepner and Krause⁸ gave especial attention to this phase of the subject and concluded that these two factors (high electrolyte diet and repeated blood transfusions) may overload the capacity for physiological adjustment of small premature infants and lead to retrolental fibroplasia. Bedrossian and co-workers expressed the belief that blood transfusions have little or no effect on the disease.

An important recent contribution is the production of retrolental fibroplasia experimentally, as reported from various medical centers.

In November 1952, Gyllensten and Hellstrom⁷ exposed newborn mice to oxygen intermittently. Litters of full term newborn mice with their mothers were protected from oxygen poisoning by withdrawing them from this high concentration after 48 hours and leaving them in normal atmosphere for 24 hours; then returning them again to the oxygen. This intermittent exposure to oxygen was continued for from one to three weeks, after which a microscopic examination was made. Of 50 mice so treated, about one-third had definite pathological changes. The most consistent findings were hemorrhages, retinal folding and formation of a vascular, cellular and fibrous tissue in the vitreous body.

Patz¹⁸ and co-workers produced retrolental fibroplasia in numerous experimental animals—newborn rats, mice, kittens and puppies—by exposing them to 70 to 80 per cent oxygen concentrations. In pathological specimens they observed changes identical

to those of the early stages of retrolental fibroplasia in humans,^{5, 24} that is, early endothelial proliferation in the nerve fiber layer of the retina and the later changes in retrolental fibroplasia.

It has been found that newborn kittens are the best laboratory animals for these experiments. In cats the retinal vessels begin to develop from the disc by a vascular budding process between the 35th and 45th day of intrauterine life; but the blood vessels do not reach the periphery of the retina until three weeks after birth. In humans the retinal blood vessels are fully developed at birth. Therefore, in kittens the situation is ideal for experimental studies because the degree of retinal vascularization in the first three weeks of the kitten's life is very similar to the retinal vascular development in premature infants.

Ashton¹ and co-workers placed newborn kittens and mother cats in 80 per cent oxygen for six to seven days and observed that high concentration of oxygen (60 to 80 per cent) caused a vascular obliteration of the retinal blood vessels in the developing retina of the kittens. When the animals were transferred to air, abnormal vascular proliferation and retinal detachment, much like the conditions observed in fibroplasia, occurred.

Since November 1950 every premature infant weighing under 2,500 grams born at the University of California Hospital, San Francisco, is examined with special regard to the question of retrolental fibroplasia. Pertinent data are given in Table 2.

The total of 165 premature infants born at the University of California Hospital since November 1950 is so small that no important statistical evaluation can be made. However, it is of interest to note that all premature infants in whom retrolental fibroplasia developed were kept under high oxygen concentration and that since this concentration has been lowered the percentage has dropped. Actually there has not been a case of retrolental fibroplasia since April 28, 1953, but very few small babies have been born at the hospital in that time. Since November 1953 only one premature baby weighing under 1,590 gm. was born at the University of California Hospital. Since January 1954 premature babies have received less than 40 per cent oxygen concentration at the hospital, and the record is being carefully recorded every eight hours by a Beckman analyzer.

The solution of retrolental fibroplasia requires close cooperation between obstetrician, pediatrician and ophthalmologist. Accurate records should be kept by all and the uniform data correlated.

No single institution has data on enough cases to give reliable statistical information. Therefore, a cooperative clinical study of retrolental fibroplasia must be made. It was recognition of this fact that led to organization for cooperative study on a national basis. The first factor to be tested in this

TABLE 2.—Data on 165 premature infants relative to problem of retrolental fibroplasia

	Period		
	1950-1951	1951-1952	1952-1953
Infants with birth weight under 2500 gm. (total number)	61	60	44
Normal	56	54	42
Retrolental fibroplasia.....	5	6	2
Per cent	8	10	4
Active phase:			
I.....	1	....	....
II.....	2	....	....
III.....	....	1	1
IV.....	....	....	....
V.....	2	5	1‡
Cicatricial phase:			
I.....	....	....	1
V.....	2*	5†	1§

* One baby had one eye Grade III.

† One baby had one eye Grade I.

‡ One eye Stage I.

§ Grade I. One eye regressed.

	Period		
	1950-1951	1951-1952	1952-1953
Infants with birth weight under 2041 gm. (total number)	24	19	13
Normal	19	13	11
Retrolental fibroplasia.....	5	6	2
Per cent.....	16	31	15

	Period		
	1950-1951	1951-1952	1952-1953
Infants with birth weight under 1590 gm. (total number)	3	4	4
Normal	3	0	2
Retrolental fibroplasia.....	0	4	2
Per cent.....	0	100	50

	Period		
	1950-1951	1951-1952	1952-1953
Infants with birth weight under 1370 gm. (total number)	1	2	4
Normal	1	0	2
Retrolental fibroplasia.....	0	2	2
Per cent	0	100	50

Babies that developed retrolental fibroplasia

Birth date	Case No.	Sex	Weight		
			Grams	Pounds	Ounces
March 1, 1951.....	1 A*	M	1960	4	5
	1 B*	M	1850	4	1
March 2, 1951.....	2	M	1850	4	1
April 16, 1951.....	3	F	1540	3	6
June 18, 1951.....	4	F	2300	5	1
Jan. 18, 1952.....	5 A*	M	1830	4	1½
	5 B*	M	1720	3	12½
April 9, 1952.....	6	F	1525	3	5¾
Oct. 13, 1952.....	7 A*	M	1060	2	5
	7 B*	F	1070	2	5
Nov. 7, 1952.....	8†	M	1510	3	5
Nov. 23, 1952.....	9	F	1290	2	13½
April 28, 1953.....	10	F	1340	2	15½

* Twins.

† Twin.

nationwide research program was to be the role of oxygen as an etiologic factor. Results are not yet forthcoming.

In the meantime the California State Department of Public Health, with Dr. A. E. Maumenee, Jr., as chairman, has undertaken a cooperative clinical study of retrolental fibroplasia, the plan being to examine all premature infants under 1,500 grams, in certain designated hospitals, keeping careful obstet-

rical, pediatric and ophthalmological records. These reports will then be sent to the Department of Public Health where a statistician will compile the results. The purpose of this plan is to observe and record everything that happens to the infants, in hope that the analyses of these data will give clues to the cause of retrolental fibroplasia. Such plans, national and state, if carefully carried out, should aid materially not only in evaluating the effects of different oxygen concentrations but also in searching for a possible correlation between oxygen and some other contributing factor or factors or basic processes as yet unknown. While there is a generalized aversion to filling out forms, it would seem that the importance of complying with the request of the State Department of Public Health cannot be overemphasized. It is only by the cooperation of everyone in this matter that essential data can be obtained.

Meanwhile, there are two main considerations that should be kept in mind.

First and most important, high oxygen concentrations appear to be injurious and this is probably the main cause of retrolental fibroplasia.

Second, the withdrawal of tiny premature infants from the concentration of oxygen to normal air should be a gradual process.

In light of present knowledge it would seem that certain procedures are indicated in the care of premature infants: (1) Oxygen should be ordered in a very careful and precise manner, the order being written in terms of concentration rather than liter flow rate. (2) Whenever possible oxygen concentrations of over 40 per cent should be avoided. (3) In order that this concentration be accurately measured, an oxygen analyzer should be provided as standard equipment for every premature nursery with nursery personnel trained in the use of the analyzer and with standing orders that samplings be taken every eight hours.

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Parkinsonism

Early Results of Occlusion of the Anterior Choroidal Artery

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IN 1817 DR. JAMES PARKINSON⁷ optimistically stated, "There appears to be sufficient reason for hoping that some remedial process may ere long be discovered by which, at least, the progress of the disease may be stopped." And yet 137 years later it is obvious that this status has not been achieved either by medical or surgical means. Sir Victor Horsley^{5, 6} introduced the first surgical procedure for Parkinsonism in 1890 and published his final studies in 1909. The cortical excision of the motor area and subsequent modifications of the operation have for the most part been unsatisfactory because of the resultant spastic hemiplegia or hemiparesis following section or removal of some part of the so-called "pyramidal system."

In April 1953 Cooper³ reported dramatic amelioration of Parkinsonism by ligation of the anterior choroidal artery in two severely advanced cases. The following August,⁴ in a brief report of six cases, he described "striking alleviation of Parkinsonian tremor at rest," and added that "the procedure has been invariably followed by disappearance of most of the rigidity and cogwheelism from the contralateral extremities." Hemiplegia or hemianesthesia did not occur.

A brief review of the blood supply of the anterior choroidal artery, as outlined by Abbie¹ in 1936, and by Alexander² in 1942, might be of interest. The artery, which has been called the "pallidohippocampocapsular artery,"² supplies some of the areas affected pathologically by Parkinson's disease of idiopathic, arteriosclerotic, or postencephalitic type. In general the following areas of the brain are irrigated: (1) the globus pallidus, (2) the ventral part of the posterior limb and the retrolenticular portion of the internal capsule, (3) the middle third of the basis pedunculi and superficial adjacent portions of the dorsal thalamus and subthalamus, (4) the hippocampal formation and surrounding structures, (5) portions of the optic tract and lateral geniculate

• Occlusion of the anterior choroidal artery was carried out in four cases for relief of Parkinsonism. Results were disappointing but there was temporary cessation of tremor in three cases and sustained alleviation of rigidity in two cases.

The causes of these changes following operation are unknown.

body and (6) the choroid plexus of the lateral ventricle.

The present communication is a preliminary report of experience with four cases in which surgical occlusion of the anterior choroidal artery was done. The operative procedure was performed bilaterally in one case and unilaterally in three. There were no immediate postoperative fatalities. One patient, however, died of tuberculous pneumonia six weeks postoperatively. The operative technique was similar in all instances. Temporal craniotomy was performed opposite to the affected side of the body. After the temporal lobe was elevated intradurally and the interpeduncular cistern was opened, the anterior choroidal artery was identified arising from the internal carotid artery above the posterior communicating artery. Silver clips were placed upon the anterior choroidal artery just distal to its origin. In addition, the arteries were coagulated, except in the first case.

REPORTS OF CASES

CASE 1. The patient was a 59-year-old right-handed man with postencephalitic Parkinson's syndrome of 24 years' duration, demonstrated in preoperative neurological examinations. There were severe alternating tremors in the upper extremities, generalized rigidity, cogwheel phenomena and other signs of advanced Parkinsonism. The patient was unable to walk and barely able to stand with support. After occlusion of the right anterior choroidal artery on November 24, 1953, no discernible change of the neurologic picture occurred except with regard to symptoms of paralysis agitans.

During the first three postoperative days the tremor on the left was periodically absent and, when

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present, was strikingly reduced compared to that on the right. The tremor of the left hand gradually returned to its preoperative magnitude, although at times it would be totally absent. The alternating tremor of the right hand continued unchanged postoperatively. The rigidity, cogwheel phenomena, posture, drooling, and other associated symptoms apparently were not influenced by the surgical procedure. The tremor was severe bilaterally during the two weeks of terminal illness, except for brief periods when it decreased on the left side. The patient died of tuberculous pneumonia.

Upon postmortem examination it was noted that the silver clip mechanically occluding the right anterior choroidal artery was in place. The only gross change noted apparently due to the procedure was some cerebral swelling, particularly in the region of the pallidum; in addition there was a small area of contusion over the inferior surface of the right temporal lobe probably due to operative exposure. There was no other gross softening of cerebral tissue. The substantia nigra showed bilateral symmetrical degeneration which apparently was a result of the disease process.

CASE 2. A 46-year-old right-handed man with post-encephalitic Parkinson's syndrome of 26 years' duration had advanced generalized severe muscular rigidity as a major problem. In addition he had mild tremor of the lower extremities and some tremor in the upper extremities. The patient could barely walk. Occlusion of the right anterior choroidal artery was performed on November 30, 1953, followed by occlusion of the left anterior choroidal artery on January 12, 1954. The status of the patient at the time this report was written, some two months after the second operation, was somewhat worse than it was preoperatively, but he was gaining strength. The final visual fields showed no defect although they remained constricted. The progression of Parkinsonism may have been somewhat accelerated by the stress from operation. There was no essential overall improvement of any symptoms. The rigidity in the left upper extremity apparently caused further flexion attitude of the elbow, wrist, and fingers.

CASE 3. The patient, a 60-year-old right-handed man, had had unilateral idiopathic Parkinson's syndrome for nine years. He walked with a hemiparetic attitude, striking the ball of the right foot, which was inverted and flexed. The weakness of the right extremities was mild, being most pronounced distally in the fingers and toes. The gripping pressure of the right hand was 25 pounds; of the left, 90 pounds. The movements of the right hand and foot were moderately stiff. There was moderate cogwheelism and rigidity in the right upper extremity and mild cogwheelism and rigidity in the right lower extremity. The alternating tremor was moderately severe and limited to the right hand and arm. It disappeared during volitional action and sleep. There were no other significant findings except for a slight central weakness of the right side of the face, and glove and stocking type of hypesthesia and hypalge-

sia and some decrease of vibration sense on the right. Following occlusion of the left anterior choroidal artery on Feb. 2, 1954, no essential change occurred in the tremor but a remarkable and, thus far, lasting disappearance of rigidity and cogwheel phenomena resulted. The patient walked with an improved gait, no longer striking the ball of the right foot; and he was able to evert and dorsiflex the foot with greater ease. The gripping pressure in the right hand increased to 70 pounds; it was 80 pounds for the left. The strength of the muscle groups of the right extremity was greatly improved. Postoperatively a moderate degree of anomia developed; but at the time of this report it was steadily disappearing.

CASE 4. A 44-year-old right-handed man had unilateral Parkinsonism of 30 years' duration manifested mainly by alternating tremor at rest confined to the right extremities with mild cogwheelism on the same side. In addition, there was evidence of mild pyramidal tract involvement in the right extremities. The left anterior choroidal artery was occluded on April 1, 1954, and, although for the first 24 hours postoperatively the tremor completely disappeared, it gradually returned within a week to almost its preoperative intensity and remained so.

DISCUSSION

The operative results in these four cases were disappointing. However, there can be little doubt that acute occlusion of the anterior choroidal artery resulted in immediate, although temporary, cessation of tremor in Cases 1, 2, and 4. Although rigidity was relatively unaffected in Case 2, continued alleviation of rigidity is an outstanding feature of Cases 3 and 4. It is believed that craniotomy per se did not influence these changes in the Parkinsonian syndrome of these patients. The explanation for the changes of tremor and rigidity is unknown but probably is related to ischemia and hypoxia of the globus pallidus, resulting in functional loss of its afferent and efferent systems. Pathologic studies of Case 1, which are not yet complete, may substantiate this thesis.

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The authors are to be congratulated for this careful and detailed work on occlusion of the anterior choroidal artery. It is only by such contributions that a new operative procedure such as this can be evaluated.

We have done this operation in one case. The patient, a man, age 59, was subject to tremor and rigidity of the right upper extremity which had begun ten years previously. He was operated upon nine months ago and has been free from the tremor and rigidity since then. The procedure resulted in what gross tests indicate to be incomplete homonymous hemianopia, although perimetric studies show it to be complete homonymous hemianopia. We are a little surprised that the patient is very well pleased despite the visual defect. It is interesting to note that in Case 3 in the foregoing report the patient regarded the results as quite satisfactory because of relief from the rigidity and weakness although the tremor persisted.

Our case and the second case in the foregoing report, both showing postoperative visual field defect, demonstrate that even though there is collateral circulation, it is not always adequate to maintain sufficient irrigation for regions of the brain not intended to be deprived of blood supply by the occlusion. This raises the question of variation in the vascular pattern or diminished collateral circulation. One is reluctant to carry out angiography in older patients and such a critical procedure as occlusion of the anterior choroidal artery is far more hazardous than angiography.

Failure to obtain uniform results from the operation indicate there is variation in the specific pathologic changes of Parkinsonism, or there is variation in the vascular pattern and anastomoses. It is common knowledge that the configuration of the circle of Willis very often does not conform to what we regard as the normal pattern. Similarly, one may reasonably expect variation in the anterior choroidal artery. In Case 4 in the foregoing report it was noted that this artery was much smaller than in the other three cases. One must assume that that patient had either an accessory anterior choroidal artery or that the areas usually supplied by the anterior choroidal artery were in that case supplied by branches from other arteries. This variability of the vascular pattern not only makes for failure of the procedure to control the rigidity and involuntary movements of Parkinsonism, but also allows unintended important neurologic deficit to result in those cases of inadequate collateral circulation or in instances in which the anterior choroidal artery irrigates more than the usual amount of tissue.

These experiences serve as a warning that occlusion of the anterior choroidal artery is not a procedure that can be offered without reservation to patients with Parkinsonism. It would be most unfortunate if patients with this distressing condition would gain the belief that by means of a simple operation they could obtain relief. It should be emphasized that the operation is most certainly a major surgical procedure, with the possibility of serious or disastrous complications, and that even if these complications are avoided, the procedure does not guarantee relief from Parkinsonism.

Strained Meat Formulas in Allergic Diseases Of Infants and Children

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ANIMAL MEAT JUICE was first used by one of the authors in 1931^{7, 8} for the study and control of possible or definite allergic sensitivity to animal milk. Because of the low protein content in the juice that was used (approximately 5.5 per cent) liquefied meat containing 16 to 17 per cent protein was requested of various meat processors.* Liquefied meat incorporated in a formula containing approximately the protein, carbohydrate, fat and mineral content of cow's milk proved valuable in a study of sensitivity to animal milk in infants and children.⁹ The value of this formula was confirmed by Glaser² in 1943 and again in 1944.³ The formula, which was slightly modified and improved in 1950,^{10, 11} is easily prepared at home or in hospital diet kitchens. In place of commercially strained meats, meat liquefied in a blender at home may be used, as suggested by Stuart.¹² This meat-base formula recently has become commercially available.[†]

Investigations by others^{1, 4, 5, 6} indicate that meat-base formulas enriched with calcium, phosphorus, carbohydrates and vitamins are nutritionally equal to mother's and cow's milk. Such formulas offer definite advantages over milk substitutes based on soy proteins in that meat proteins are superior to those of vegetable origin which must be fed in appreciably larger quantities for normal growth, development and maintenance. Infants accept such formulas well. The incidence of diarrhea and indigestion, which is rather high when soy bean formulas are used, is relatively low with meat formulas. Fewer patients are sensitive to meat than to legumes. The meat-base formula is diluted as indicated by the age of the patient and other factors, as is cow's milk, in infant feeding. Other foods may be added in consideration of the age and nutritional requirements of the patient, with heed given at the same time to the possibility of sensitivity to the added food. Although skin testing with foods is fallible, large reactions by the puncture method, which is most desirable in infants and young children, make the inclusion of such reacting foods in the diet undesirable until the ab-

• *Strained meat formulas containing approximately the protein, carbohydrate, fat and mineral content of cow's milk have proven valuable in the study of animal milk allergy in infants and children.*

Strained meat formulas have been given to over one hundred infants and children with bronchial asthma, eczema and gastrointestinal allergic disease. There were no instances of weight loss or anemia. Clinical improvement was evident in most cases.

sence of clinical allergy thereto has been established by ingestion tests.

Meat-base formulas (see Table 1), modified according to special needs, may be fed to older children and adults unable to chew, swallow or digest ordinary meat or when tube feeding is necessary. Strained meats alone may be used in place of minced or ground meats in late infancy and childhood. Being precooked, sterile and low in fat, they may be fed as such or combined with pureed vegetables, cooked potato or tapioca in a thick mixture or thinned with pureed beef or lamb broth as a soup, salted to taste.

THERAPEUTIC AND DIAGNOSTIC USE

Food allergy should be studied as a possible cause of colic and feeding difficulties, other gastrointestinal symptoms, dermatitis, eczema, hives, suspected nasal allergy, croup, recurrent "colds," bronchitis, bronchial asthma, unexplained fever, anorexia, nervousness and irritability, so-called allergic toxemia and fatigue, and other less common manifestations of allergy. In the authors' practice, the initial diet for infants utilizes soy bean milk when sensitivity to animal milk is suspected or indicated by history or skin testing by the puncture or scratch method. When soy bean milk is not tolerated or sensitivity to it is demonstrated, meat-base formulas are employed. If the degree of sensitivity to milk is high, the lamb formula is prescribed; otherwise the meat-base formula containing beef, either made at home or commercially prepared, is used routinely. The choice between sesame or soy oil and potato starch flour or tapioca flour depends on the dietary history

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*In 1941 Clapp and Company supplied the material and since then it has been made commercially available by Swift & Company and by Gerber Products Company.

†Gerber's Meat-Base Formula.

TABLE 1.—Substitute formula for cow's milk containing strained meats.

	Wt. grams	Measure
Strained lamb, 15.6% protein, 4.5% fat	212.0	1 cup—7 oz.
or		
Strained beef, 17.7% protein, 3.0% fat.....	186.0	$\frac{3}{4}$ cup—6 oz.
Sesame oil or soy oil.....	32.5	$3\frac{1}{8}$ Tbsp.
Sugar.....	30.0	2 Tbsp.
Potato starch flour, 83% C.....	24.0	$2\frac{1}{2}$ Tbsp.
or		
Tapioca flour, 88% C.....	23.0	$2\frac{1}{2}$ Tbsp.
Calcium carbonate.....	3.0	1 Tsp.
Salt.....	1.75	$\frac{1}{2}$ Tsp.
Water to make a volume of 1,000 cc.....		$4\frac{1}{4}$ cups

Total for 1,000 cc.: Carbohydrates, 50 gm.; calcium, 1.24 gm.; protein, 33 gm.; fat, 40 gm.; phosphorus, 0.31 gm.; iron, 0.005 gm. Calories: 692.

All measurements are level, using standard measuring cups and spoons. Heat water to boiling in top of double boiler. Add sugar, salt, and calcium carbonate. Mix the potato starch or tapioca flour to a paste in $\frac{1}{3}$ cup cold water and stir into the boiling water. Cook for 45 minutes, stirring occasionally to prevent lumping. If necessary add water to allow for evaporation. Add the strained meat and oil, mix thoroughly, and reheat.

and previous diet trial. The decision to use bottle or cup feeding depends on the infant's or child's feeding habits. The commercially available canned meat-base formula is usually diluted with equal parts of boiled water, as is evaporated milk.

Because the vitamin A and riboflavin content of meat-base formulas is not equal to that of cow's milk, a preparation containing adequate amounts of these and other B complex vitamins is prescribed. Such vitamin preparations should be synthetic until tolerance to fish proteins is assured.

In infants, as the need for solid food arises, the authors customarily feed additional strained and later minced meats as such, and potato and tapioca as cereal substitutes are added as advised in the authors' cereal-free elimination diet for infants. This insures the continued feeding of relatively non-allergenic foods. Cereal grains, pureed vegetables and fruits, and later other foods may be added according to tolerance and need as advised.

In critically ill allergic infants and children, as well as adults, these strained meat formulas are useful for short periods of tube feedings. Extra meat, sugar, and oil may be added to increase caloric intake.

PROPHYLACTIC USE

The meat-base formulas have proven to be a valuable addition to rotating diets employed for purposes of prophylaxis of allergic disease caused by sensitivity to foods. They may be fed alternately with soy bean milk in an effort to avert sensitization from the overfeeding of single foods. When a high degree of sensitivity to soy bean milk or animal milk exists in parents or siblings, the lamb-base formula is used exclusively over a period of several months after weaning. However, if there is large reaction to puncture test with lamb and no reaction to beef or pork, the latter meats would be preferred, especially if, upon the feeding of lamb, symptoms of sensitivity develop.

Over one hundred infants and children who had eczema, bronchial asthma and gastrointestinal allergic disease have been given strained meat formulas for periods exceeding three months. In no instance was weight loss observed. Routine examinations of the blood revealed no resultant anemia. A rise in hemoglobin content was noted in most patients. Clinical improvement was evident in most cases.

2940 Summit Street.

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Relation of Trauma to Disease

Aspects of Correlation in Cases Involving Compensation

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IT IS COMMON MEDICAL KNOWLEDGE that the lay public usually overemphasizes the role of trauma as a causative factor in occupational diseases. On the other hand, some physicians are too much inclined to give trauma short shrift in etiological consideration. Further study of the problem is needed because of the continuing extension of compensation laws to cover more and more problems of disease in relation to the occupation of the patient. More knowledge is needed because of the growing social and legal implication of such relationship. It is admitted that in many areas of the subject the available knowledge is incomplete; but it is very complete in many others. Some variance of opinion is probably justified, but too much of the difference of opinion at the present time is due to unfamiliarity with the subject. Physicians in industry are constantly confronted with problems that stem from a private practitioner's inadequate attempts to ascertain the true facts of a case.

A single injury (nonrecurrent trauma) may fall into one of five different categories in its relationship to a disease, if such relationship exists. These relationships are: (1) direct; (2) temporarily aggravating; (3) accelerating; (4) precipitating symptoms of a latent preexistent process; (5) bringing the patient's attention to a previously unrecognized condition. Except in the direct classification of producing disease, trauma represents a secondary, non-specific and inconstant factor. Conversely, it must be recognized that preexistence of disease may also lead to trauma, as in the instance of syncope resulting in injury.

It can be stated further that, with regard to their relationship to trauma, diseases may be classified into three groups, as follows: (1) diseases directly due to trauma, such as fractures, wounds and infections; (2) diseases that are never due to a single injury, such as measles or arteriosclerosis; (3) diseases usually occurring without trauma, but in which sometimes trauma may be a causative factor. It is with regard to diseases of this group that controversies most often arise. Examples of diseases in this group are Charcot joint, renal abscess, exophthalmic goiter and the arthritides. Each case in this classification

• In cases of disease possibly etiologically related to industrial trauma and therefore raising questions of compensation, attention should be given at the very outset to factors that might help supply the answers to these questions.

In such circumstances it is helpful if the first physician to examine the patient after the onset of disease attempts to:

- 1. Determine whether the disease has been accelerated by injury or is proceeding at the usual rate;*
- 2. Establish the stage of the disease;*
- 3. Estimate the time of onset;*
- 4. Make differential diagnosis (in many cases) between diseases of idiopathic origin and unaffected by trauma and diseases directly due to trauma.*

must be studied on its own merits and in light of the facts pertinent to that given case. In some instances, repeated observation by various physicians that there is clinical evidence of a given disease following trauma of a certain kind is sufficient to classify the condition, even though usually the disease is one that usually develops without injury as a precursor. In some diseases experimental evidence indicating a relationship of trauma to the disease in question carries great weight; but negative results of experimental evidence do not necessarily preclude a decision that, in a given case, trauma caused a disease. When carefully done, statistical studies may have definite classifying value. Pathological examination, which would of course supply data that ultimately would provide a better basis for evaluation of cases in the future, is unfortunately not carried out often enough.

Should a physician feel that a given case belongs in the third of the three classifications defined above, he should try to arrive at a decision as to what part trauma may have played as a causative factor. To do this, the following points should be considered:

1. The condition of the patient, both physical and mental, before injury.
2. The type, severity and site of the injury. The importance of a physician's making early records,

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including all facts available, cannot be too strongly stressed.

3. The immediate effects of the injury, both subjective and objective. Once again, these findings in detail can be of immense value at a later date. Too often a medical record simply states only that there was "contusion of the back," with no description of the actual objective findings or the specific location.

4. "Bridging symptoms"—in this category frequent progress notes, covering the symptoms of the patient between the time of injury and the onset of a given disease process, carry great weight.

5. The latent period of the disease. This refers to the lapse of time between the date of injury and the appearance of the disease.

6. The accurate diagnosis of the disease—including the site of onset, the nature of onset, and the subsequent course.

Records of preemployment examinations and periodic physical examinations can be of considerable value in such determinations. However, if these examinations were poorly done or the results poorly recorded, the records may be entirely misleading instead of helpful.

Early adequate records covering the severity, site and type of injury and the immediate symptoms and signs are of utmost importance. In general, it may be said that if a disease results from trauma, symptoms of some kind are usually present more or less constantly from the date of injury to the appearance of the disease. If the patient does not follow the convalescent sequence to be expected following an injury, the continuing symptoms may warn that some other condition will soon appear.

As to the time between injury and disease, the latent period may have some resemblance to the time between exposure and development of the infectious diseases. It is of course variable with the disease involved, but represents the time necessary for trauma to institute the disease and the pathological process to develop to a stage at which it can be diagnosed. Once diagnosis of the disease is made, it is often obvious that the time is too short, or too long, for there to have been any relationship to a given injury.

Between these two extremes there is, unfortunately, considerable leeway in certain cases, due to present inadequate knowledge in this respect. The question of whether an injury accelerated an already pre-existent disease must be considered in the light of the normal course of that disease. In diseases in which the process normally becomes steadily worse, the fact that an injury occurred intercurrently is by no means an indication that the trauma was a causative factor.

It must not be forgotten that psychic as well as physical trauma may be a factor in production of disease. The diagnosis should not be limited to simply giving the disease process a name; attempt should be made to:

1. Determine whether the disease has been accelerated by injury or is proceeding at the usual rate.
2. Establish the stage of evolution of the disease.
3. Estimate the time of onset.
4. Make a differential diagnosis (in many cases) between diseases of idiopathic origin and unaffected by trauma as opposed to those directly due to trauma.

It should be emphasized that the physician should consider only what relationship the conditions brought about by injury in a given case may bear to whatever disease is present and possibly attributable to the injury. Although medicine is admittedly not an exact science, the physician should consider the facts that are available and give his best opinion without equivocation. He should not be swayed by consideration of what effect his conclusions might have upon others, such as the patient, the insurance carrier and legal representatives. His conclusions should not become deformed by consideration of possible economic or social consequences, for such matters probably belong in the field of social policy and the law. The need for better knowledge in this field is evident in the continually expanding social pattern and changing legal decisions; and the knowledge can be obtained only by continued efforts by physicians meeting these problems to properly evaluate and analyze the factors involved, and to pass on the knowledge to other physicians.

111 West Seventh Street.

CASE REPORTS

- Botulism Treated with Tracheotomy and Respirator
- Familial Periodic Paralysis
- Meningococcus Meningitis

Botulism Treated with Tracheotomy and Respirator

WALTER T. SUMI, M.D., Los Angeles

A 37-YEAR-OLD WHITE WOMAN was well until June 24, 1953, when she began to have double vision. The following day her tongue seemed "thick" and she had some difficulty in talking. She also had slight drooping of the eyelids, seemed to talk through her nose, noticed increased salivation and had difficulty in swallowing solid foods. A physician diagnosed myasthenia gravis and prescribed Prostigmine (neostigmine) tablets but the patient received no benefit from the treatment. Weakness of the neck and of the legs began June 28. There was no fever, headache, stiffness of the neck or back, and no respiratory distress at any time. On June 30 the patient choked on a piece of meat, and the physician who was treating her referred her to the Communicable Disease Unit of the Los Angeles County General Hospital on suspicion of poliomyelitis.

The patient was well developed, well nourished and appeared to be in no acute distress. The temperature was 97.6° F., the pulse rate 76 per minute and respirations 20 per minute. The skin was clear and no evidence of recent trauma to the head was noted. The pupils were round, regular and equal, and reacted well to light. The extraocular movements were normal, and no drooping of the eyelids was noted. The ears, nose and throat were normal. The gag reflex was intact, and there was no pooling of secretions in the hypopharynx. The neck was supple, but there was pronounced weakness of the neck muscles, and "head drop" was present. The chest was symmetrical with good respiratory movements. The lungs and the heart were normal. The abdomen was soft and no organs or masses were palpated. The deep tendon reflexes were present and equal, but all the superficial reflexes were absent. The Kernig, Brudzinski and Babinski signs were absent. There was pronounced weakness of the neck muscles, diaphragm, deltoid muscles and the hip flexors.

The hemoglobin content of the blood was 16 gm. per 100 cc. and leukocytes numbered 6,400 per cu.

mm. with 60 per cent polymorphonuclear cells. No abnormalities were observed in the cerebrospinal fluid and there was no increase in pressure. (In subsequent examinations of the blood the serum potassium content was 3.9 to 4.6 millequivalents per liter.)

The diagnosis on admission was bulbospinal poliomyelitis with myasthenia gravis to be ruled out.

The day after admission the patient remained afebrile and continued to have pronounced difficulty in swallowing liquids as well as solids. There was slight pooling of secretions in the hypopharynx and the gag reflex seemed diminished. Prostigmine, 2.5 mg., was given intramuscularly and there was subjective improvement temporarily, the patient reporting increased ability to swallow and less weakness in the neck; but the pooling persisted.

A consulting neurologist made the diagnosis of myasthenia gravis and advised a regimen of Tensilon (edrophonium chloride), Prostigmine and atropine every four hours. The patient had little if any response to these drugs and seemed to be gradually deteriorating. On July 3, because of excessive accumulation of mucus and diminution of vital capacity to 650 cc., tracheotomy was performed. On the following day there was no improvement in the respiratory status in spite of almost continuous suctioning through the tracheotomy tube. The patient steadily became more and more exhausted, and it was decided to place her in a respirator. She accommodated well and was immediately more comfortable. As the patient was unable to swallow, nutrition was maintained by nasogastric tube feedings.

On July 7 an attending physician elicited a history of contact with a home-canned product, and his impression was botulism. The patient apparently opened a can of huckleberry juice and tasted it, two days before the onset of symptoms. Because it tasted bad she promptly discarded the remainder of the contents of the can. *Botulinus toxin A* was eventually demonstrated in another specimen of this home-canned huckleberry juice by the state and city health departments.

The patient improved slowly and gradually regained the ability to swallow. After about one month the patient was taken out of the respirator for a short interval each day. After 44 days in the respirator she was finally able to remain out for 24 hours on her own. The tracheotomy tube was removed two

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days later. However, she continued to bring up thick, tenacious mucus with some difficulty because of a weakened cough. On August 23, she became febrile and dyspneic and upon physical examination dullness to percussion and diminished breath sounds were noted in the right lower lung field, and a density of the lower two-thirds of the right side of the chest was noted on an x-ray film. Bronchoscopy was done the next day and a large amount of thick, tenacious mucus was removed from the right lower lobe bronchus. The patient felt improved after this procedure, but there was essentially no change by auscultation and percussion and by x-ray. Following antibiotic therapy she recovered completely.

SUMMARY

This report concerns a protracted non-fatal form of botulism with severe weakness of muscles and respiratory paralysis apparently due to the ingestion of an extremely minute quantity of the botulinus toxin. Tracheotomy and use of a respirator probably were life-saving. Paralysis of the pharyngeal and respiratory muscles closely allies this disease to bulbar poliomyelitis insofar as management and treatment of the patient is concerned. In spite of the complicating atelectasis and pneumonia, the patient recovered completely.

1200 North State Street.

Familial Periodic Paralysis

JOHN L. DENNEY, M.D., Los Angeles

FAMILIAL PERIODIC PARALYSIS was first reported by Musgrave⁴ late in the 17th Century. The familial characteristics were first described in 1882. The observation that serum potassium content decreased during an attack was reported by Biemond and Daniels in 1934.

Characteristically the onset is noted in adolescence, although it has been reported as early as the sixth month of life and as late as the sixth decade. Attacks usually occur at night during sleep. They may be precipitated by a heavy meal, by violent exercise or by exposure to cold. Attacks vary in severity from patient to patient and from time to time in the same patient. The attacks may range from a mild weakness of a single muscle group to complete quadriplegia with respiratory paralysis and death. The cranial nerves are usually spared. The disease usually becomes less severe with age.

REPORT OF A CASE

A 15-year-old Caucasian girl was referred to the Communicable Disease Unit of the Los Angeles County General Hospital May 6, 1953, with a diagnosis of poliomyelitis and a history of paralysis of six hours' duration involving all four extremities.

The patient had awakened at 4 o'clock on the morning of entry, unable to move and with complaint of stiffness of the neck without headache. Upon admittance she was alert, afebrile and beginning to recover ability to move her arms. Upon physical examination, complete paralysis of arms and legs with pronounced paresis of the hands and feet was noted. The neck was supple but weak. Deep tendon reflexes were absent throughout. The spinal fluid was clear; there were no cells. Reaction to a Pandy test showed a trace of protein; the sugar

content was normal. A serum potassium determination on blood taken at the time of admission revealed a level of 2.1 mEq. per liter. An electrocardiogram was consistent with hypopotassemia.

The patient recalled three to four similar previous episodes during the preceding two years, all occurring at night. From members of the family it was learned that the patient's great-great-grandfather, great-grandfather, grandfather, father, four of six uncles (father's brothers), none of four aunts, and two of the patient's siblings had had similar episodes.

The patient's father had had the most severe disease of the group; attacks occurred regularly after severe exercise and were frequently precipitated by a heavy meal.

The patient gradually regained function during the 24 hours after admittance and the remainder of the stay in hospital was uneventful. An attempt to precipitate an attack with a glucose tolerance test was unsuccessful. Serum potassium remained within normal limits during the test. An electroencephalogram was normal.

SUMMARY

A case of familial periodic paralysis is reported. Although previously undiagnosed, the disease was traced through five generations of the patient's family.

1200 North State Street.

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Meningococcus Meningitis

Three Cases Resistant to Penicillin

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PENICILLIN IS WELL-KNOWN as the antibiotic of choice in the treatment of *Neisseria meningitidis* infection. Also of great interest is the extraordinary sensitivity of this organism to the sulfonamides. In the Glasgow epidemic of 1907 there was a case fatality rate of 70 per cent. From 1920 to 1936, the composite case fatality rate as computed from reports in various areas of the United States was 51.2 per cent. This was after the advent of the use of immune serum in the treatment of the disease.

Penicillin and the sulfonamides have strikingly lowered the fatality rates of meningococcal meningitis to less than 10 per cent. Some physicians feel that the use of two antibiotics may be harmful, but in the three cases reported upon herein, two antibiotics were used until it was found that the organisms were resistant to penicillin, and there were no harmful effects clinically evident. Two of the patients had been given penicillin at various times previously, and in them the organisms were completely resistant to penicillin.

CASE 1. An 18-year-old white male was admitted to hospital the night of Jan. 31, 1953, with a history of vomiting, then sore throat and fever (103° F.) for 24 hours and a slight headache and extreme restlessness the night before admittance. The morning of the day of admittance, the patient noted a rash on his body. He had had "flu," consisting of sore throat and nausea, a week before. Intermittently during the previous year he had received penicillin for sore throat and colds.

Upon physical examination the patient was observed to be lying quietly in bed, alert and complaining of headache. There were petechiae scattered over the trunk and extremities as well as in the conjunctivae. The vessels of the throat were engorged. There was pain on flexion of the neck, but no nuchal rigidity. Deep tendon reflexes were normal and no pathological reflexes were noted.

The spinal fluid was cloudy and contained Gram-negative diplococci. A diagnosis of meningococcal meningitis was made. *Neisseria meningitidis* grew on cultures of spinal fluid and blood, *Streptococcus viridans* and *Staphylococcus aureus* on cultures of material from the throat, and *Staphylococcus albus* and diphtheroids on cultures of exudate from petechiae.

Therapy consisted of five million units of sodium penicillin intravenously and twenty-five million units of potassium penicillin every eight hours for five days until sensitivity studies were returned. The organisms were reported resistant to penicillin; moderately sensitive to streptomycin; and highly sensitive to chloramphenicol and Terramycin. The patient had allergic sensitivity to sulfa drugs, so none was given. At first 500 mg. of chloromycetin was given intravenously every two hours, four times;

TABLE 1.—Data on cerebrospinal fluid and blood (Case 1)

Date	CEREBROSPINAL FLUID				Sugar*	Pandy Test reaction
	Total per cu. mm.	Cells Polymorpho-nuclear (Pct.)	Lympho-cytes (Pct.)			
Jan. 31, 1953	450	100	....	5 gtt.	1 plus	
Feb. 1, 1953	4,180	98	....	3 gtt.	3 plus	
Feb. 2, 1953	1,126	75	25	3 gtt.	2 plus	
Feb. 3, 1953	716	70	30	4 gtt.	1 plus	
Feb. 4, 1953	75	55	20	4 gtt.	trace	
Feb. 5, 1953	40	6	34	2 gtt.	trace	
Feb. 6, 1953	32	3	29	3 gtt.	trace	
Feb. 9, 1953	8	....	100	trace	trace	
Feb. 12, 1953	11	....	100	3 gtt.	trace	
Feb. 15, 1953	11	....	100	5 gtt.	trace	
Feb. 18, 1953	4	....	100	3 gtt.	trace	
Feb. 21, 1953	5	....	100	3 gtt.	trace	

*Stated in number of drops of spinal fluid required to reduce 1 cc. of Benedict's solution (normal, 2 to 3 drops).

Date	BLOOD				Hemoglobin (gm.)
	Leukocytes per cu. mm.	Cells Polymorpho-nuclear (Pct.)	Lympho-cytes (Pct.)		
Jan. 31, 1953	42,000	92	....		13.5
Feb. 1, 1953	30,000	95	....		13.5
Feb. 3, 1953	13,600	84	16		12.5
Feb. 4, 1953	8,400	77	23		15.0
Feb. 5, 1953	19,700	80	20		13.5
Feb. 14, 1953	10,550	48	52		13.0
Feb. 17, 1953	19,400	74	26		15.5
Feb. 20, 1953	9,100	71	29		12.5

then intramuscularly every three hours until Feb. 3, and then 500 mg. orally every four hours.

The clinical course was satisfactory and on Feb. 4 the patient was tolerating diet well. He became afebrile on Feb. 7 and remained so. Data on laboratory examinations of the cerebrospinal fluid and the blood are given in Table 1.

Electroencephalograms on various dates were as follows: Feb. 1, moderately diffuse, abnormal; Feb. 9, normal; Feb. 11, moderately diffuse, abnormal; Feb. 16, mildly diffuse, abnormal; Feb. 20, normal.

Antibiotic therapy was discontinued Feb. 15 and the patient was discharged Feb. 22, twenty-two days after admission, free of symptoms.

CASE 2. A two-year-old white girl was admitted to hospital Feb. 3, 1953, with history of fever (102° F.), listlessness and malaise of five days' duration. The night symptoms started, the patient had a convulsion that lasted more than five minutes and she vomited anything ingested. The next day a physician examined her and administered 600,000 units of penicillin. She continued listless and febrile but did retain some liquids. The following day penicillin was administered again, and then 300,000 units every six hours.

The day before admission to hospital the patient had pain in the knees and elbows but there were no more convulsions or vomiting. Nuchal rigidity developed, however, and the patient was hospitalized. Until the present illness she had never been given penicillin.

When examined upon admittance, the patient was lethargic, listless and very irritable. There were no petechiae present on the body. The vessels of the nose were engorged but the pharynx was clear. There

From the Communicable Disease Unit, Los Angeles County General Hospital, Service of A. G. Bower, M.D.

TABLE 2.—Data on cerebrospinal fluid and blood (Case 2)

CEREBROSPINAL FLUID					
Date	Total per cu. mm.	Cells		Sugar	Pandy Test reaction
		Polymorpho-nuclear (Pct.)	Lympho-cytes (Pct.)		
Feb. 3, 1953	1,296	64	36	7 gtt.	2 plus
Feb. 4, 1953	504	74	26	3 gtt.	1 plus
Feb. 5, 1953	522	62	38	3 gtt.	trace
Feb. 6, 1953	132	84	16	3 gtt.	2 plus
Feb. 7, 1953	58	3	55	3 gtt.	.....
Feb. 10, 1953	Bloody	.....	.....	.....	.....
Feb. 13, 1953	12	1	11	3 gtt.	trace
Feb. 17, 1953	11	1	10	3 gtt.	slight trace
Feb. 20, 1953	18	.....	18	3 gtt.	trace
Feb. 23, 1953	Bloody	.....	.....	.....	.....
Feb. 26, 1953	Bloody	.....	.....	.....	.....
Mar. 1, 1953	.....	.....	1	3 gtt.	trace
Mar. 3, 1953	Bloody	4	29	.....	.....
Mar. 9, 1953	22	2	20	.....	trace
Mar. 13, 1953	6	.....	all	3 gtt.	neg.

BLOOD				
Date	Leukocytes per cu. mm.	Cells		Hemo-globin (gm.)
		Polymorpho-nuclear (Pct.)	Lympho-cytes (Pct.)	
Feb. 3, 1953	27,000	91	9	12.0
Feb. 4, 1953	16,500	58	42	12.5
Feb. 5, 1953	18,950	.....	.....	.....
Feb. 6, 1953	9,000	42	58	10.0
Feb. 8, 1953	7,000	80	20	12.0
Feb. 14, 1953	10,200	52	48	11.0
Feb. 17, 1953	7,200	62	38	13.0
Feb. 20, 1953	9,950	56	44	12.0
Feb. 26, 1953	5,200	62	38	15.0
Mar. 1, 1953	7,400	38	62	12.0
Mar. 9, 1953	7,600	50	50	12.5
Mar. 12, 1953	6,000	50	50	13.0

was three plus nuchal rigidity and the Kernig and Brudzinski signs were present. Spasm of two plus degree was noted in the back and hamstring muscles. Deep tendon reflexes were equal and hyperactive.

A specimen of spinal fluid was grossly cloudy and Gram-negative diplococci were observed on microscopic examination. *Neisseria meningitidis* grew on cultures of spinal fluid but there was no growth on cultures of the blood. Cultures of material from the throat produced *Staphylococcus albus*.

The patient received 200 million units of potassium penicillin in the first 72 hours in the hospital. Terramycin was given intravenously, 250 mg. every four hours for two days and then 250 mg. every six hours for one day. Then Terramycin was given by mouth, 250 mg. every four hours for two days and then that amount every six hours. Terramycin then was discontinued and sodium penicillin (1 million units) was given every four hours for two days, as well as penicillin, 600,000 units twice daily for five days. In vitro, the organism was resistant to low concentrations of penicillin and moderately sensitive to high concentrations. They were resistant to streptomycin and highly sensitive to chloramphenicol, aureomycin and Terramycin. The patient was given 1.75 gm. each of sulfadiazine and sulfisomidine on admission but this medication was discontinued because of erythrocytes in the urine.

TABLE 3.—(Case 3) Data on cerebrospinal fluid and blood, and on concentrations of sulfa drugs administered

CEREBROSPINAL FLUID					
Date	Total per cu. mm.	Cells		Sugar	Pandy Test reaction
		Polymorpho-nuclear (Pct.)	Lympho-cytes (Pct.)		
Feb. 8, 1953	42	88	12	4 gtt.	neg.
Feb. 9, 1953	853	81	19	2 gtt.	trace
Feb. 11, 1953	135	62	38	2 gtt.	trace
Feb. 12, 1953	30	6	24	3 gtt.	trace
Feb. 14, 1953	1	.....	1	3 gtt.	trace
Feb. 16, 1953	0	.....	.....	3 gtt.	trace
Feb. 17, 1953	11	.....	11	3 gtt.	trace
Feb. 20, 1953	Bloody	.....	.....	.....	.....
Feb. 23, 1953	8	.....	8	3 gtt.	1 plus
Feb. 26, 1953	4	1	3	3 gtt.	trace
Mar. 1, 1953	9	3	6	3 gtt.	1 plus
Mar. 6, 1953	5	2	3	3 gtt.	.....

BLOOD				
Date	Leukocytes per cu. mm.	Cells		Hemo-globin (gm.)
		Polymorpho-nuclear (Pct.)	Lympho-cytes (Pct.)	
Feb. 8, 1953	10,100	70	30	15.0
Feb. 9, 1953	23,200	55	45	12.5
Feb. 10, 1953	19,000	85	15	10.5
Feb. 11, 1953	16,600	80	20	12.5
Feb. 12, 1953	9,650	75	25	11.0
Feb. 14, 1953	6,400	46	54	13.0
Feb. 16, 1953	8,450	55	45	14.0
Feb. 17, 1953	9,250	73	27	13.0
Feb. 20, 1953	9,450	53	47	12.5
Feb. 26, 1953	5,600	62	38	15.0
Mar. 1, 1953	9,000	48	52	13.0
Mar. 6, 1953	7,450	67	33	13.0

SULFA DRUG CONCENTRATIONS (mg. per 100 cc.)				
Date	Blood	Spinal fluid	Urine	pH of urine
Feb. 9, 1953	25.0	11.1	7.9	6.0
Feb. 10, 1953	49.2	31.2	.....	.....
Feb. 11, 1953	40.6	25.0	34.3	5.0
Feb. 12, 1953	62.5	37.5	87.5	5.0
Feb. 14, 1953	9.3	5.0	10.0	.....
Feb. 16, 1953	1.2	1.2	5.3	.....
Feb. 17, 1953	0	0	0	.....

The clinical course was satisfactory and the day following admission the patient was ingesting fluids. No convulsions occurred. The temperature was 101° F. on admission and varied from 98.2 to 100.4° F. until Feb. 10. Thereafter the temperature rose occasionally to 100.2° F. up to the time of discharge from the hospital.

Data on laboratory examination of the spinal fluid and blood are given in Table 2.

Antibiotic therapy was stopped on March 1 and the patient was discharged as cured 39 days after admission to the hospital.

CASE 3. A four-and-one-half-year-old white boy was admitted to hospital Feb. 8, 1953, with two-day history of rhinitis and pain in the legs and feet and of vomiting and fever for one day. The patient had been well previously except for "runny nose." The evening he entered the hospital the patient's mother noted a rash on his abdomen, which spread over the body. There was no history of exposure to any disease. The patient previously had had penicillin from time to time for frequent colds and sore throat.

Upon physical examination the patient was observed to be acutely and severely ill, but apprehensive and oriented. The temperature was 104.6° F. and the blood pressure 102/60 mm. of mercury. Generalized petechial eruption was present over the trunk and extremities. The face was flushed. There was one plus nuchal rigidity. Reflexes were equal and active. Kernig's sign was present. The spinal fluid was clear.

A diagnosis of meningococcus meningitis was made and treatment was started. Cultures of spinal fluid and petechial exudate grew *Neisseria meningitidis*.

Therapy consisted of 25 million units of sodium penicillin in the first eight hours and 200 million units of potassium penicillin in the first 48 hours by the intravenous route. Sensitivity studies were carried out and the organisms were found to be resistant to penicillin, moderately sensitive to streptomycin and highly sensitive to chloramphenicol, aureomycin and Terramycin. The patient was given 250 mg. of Terramycin intravenously every four hours for four days. Then the antibiotic was given by mouth until Feb. 25 when therapy was discontinued. Sulfadiazine and sulfisomidine, 2.5 gm. each, were given every eight hours by clysis for eight times, and then 0.5 gm. each orally every four hours for four days. The evening of admission, gastric suction was applied and was continued for one day; "coffee ground" material was removed.

Improvement was pronounced, particularly in the first 48 hours. The first evening there were three generalized convulsions; after that, none. The temperature decreased from 104.6° to 98.6° F. eight hours after admission. It then varied from 98.6° to 100.8°

F. for seven days and after that was normal. Data on laboratory examinations of cerebrospinal fluid and blood are given in Table 3.

Reports on electroencephalograms made during the illness were as follows: Feb. 11, diffusely abnormal; Feb. 20, mild diffusely abnormal; Feb. 27, normal.

Antibiotic therapy was discontinued Feb. 25 and the patient was discharged, well, March 6, 28 days after admission.

DISCUSSION

In the three cases of meningococcus meningitis presented, the organisms were resistant to penicillin. If it had been decided that penicillin was the drug of choice, since *Neisseria meningitidis* usually is so sensitive to it, and no other agent had been used, the end result might have been fatal. Fortunately, two antibiotics were used at the beginning of therapy with the thought in mind that if the organisms were not sensitive to one antibiotic they might be to the other. With the widespread use of antibiotics today for minor illnesses, it seems logical, when meningitis is diagnosed, to use two or more in the initial therapy until sensitivity studies are done.

SUMMARY

Three cases of meningococcus meningitis are reported in which the infecting organisms were resistant to penicillin, as sensitivity studies determined. Fortunately, other antibiotics were used with penicillin at the outset of therapy.

1200 North State Street.

EDITORIAL

Closed Panel Medicine and the Law

ON JULY 9, 1954, the California Supreme Court announced its decision in the case of Complete Service Bureau against the San Diego County Medical Society. The judges were divided, five in favor of Complete Service Bureau and two in favor of the Society. The written opinion handed down by the majority creates brand new law in the field of closed panel prepaid medical care. It overrules *sub silentio* the court's own prior decisions holding that a corporation may not hire physicians, dentists or lawyers and then sell their services to the general public on a contract basis and by means of advertising or solicitation.

Complete Service Bureau was incorporated in 1939 as a "non-profit" corporation by a layman, W. D. Parmer. He immediately entered into a long-term management contract with the Bureau under which he was given complete control over its operations and, as his "take," a percentage of the gross receipts (25 per cent). Several years later and without the payment by him of any money, he acquired a majority stock interest in a "for-profit" corporation which owns the land, building and equipment occupied by Complete Service Bureau.

After Parmer's acquisition of control of the landlord corporation, Complete Service Bureau paid ten per cent of its gross receipts to the landlord corporation, presumably as "rental." Throughout its history Complete Service Bureau has maintained a staff of salesmen on a commission basis and has solicited the general public to purchase its contracts by door-to-door selling, direct mail literature and newspaper and radio advertising. Its contract requires the subscriber to pay \$2.50 per month, for which the subscriber is entitled to limited hospitalization at the expense of the Bureau, and physicians' services from the physicians of the Bureau at a fixed fee schedule. The fee schedule is quite low, ranging from one

dollar for a follow-up office visit to a maximum of ninety-five dollars for major surgical operation. However, all subscribers pay cash at the time of service. The Bureau employs ten full-time salaried physicians.

The Supreme Court, reversing a contrary decision of the District Court of Appeal, held that the corporation could legally engage in a medical service plan and supply medical services through salaried physicians as long as there was no public admission of interference by the corporation or its lay managers with the actual diagnosis, prescriptions or treatment of patients. The provisions of the Medical Practice Act, prohibiting advertising, fee splitting and the use of solicitors (cappers or steerers) were shrugged aside. As to advertisement, the court did not believe that any of the Bureau's methods were misleading. On the subject of fee splitting, the court said: "It is customary for medical groups to pay rent, employ business managers and compensate members on a unit basis." Solicitation, the court said, is prohibited to individual physicians, but not to medical service groups, "since," said the court, "the public is being solicited to join the group and not for any particular practitioner"!

The two dissenting justices vigorously argue that the Bureau and its manager, Parmer, were intervening in the practice of medicine for the personal benefit of Parmer and that "arrangements of this type have been consistently condemned." The dissenting justices also pointed out that Parmer's percentage arrangement necessarily constituted illegal fee splitting and that the case, as a whole, was one of unlawful practice of medicine.

In the course of the majority opinion the court repeatedly explains away Parmer's ownership and control by characterizing him as merely a business manager and by comparing Complete Service Bureau with medical groups composed entirely of phy-

sicians, who employ business managers. The differences between a group of physicians who form a partnership for the practice of medicine with a business manager to handle their business affairs as their agent, and a corporation controlled by a layman in which the physicians are mere hirelings, either were not understood by the majority justices or were intentionally ignored. The stress placed upon terms such as "group practice," "business management" and "low cost medical service" leads one to believe that the court intended—regardless of previous

Supreme Court decisions—to legalize closed panel medical care. It would appear that the commercial features of Complete Service Bureau were glossed over so that the court could assure closed panel groups that they are safe from legal attack. For example, in discussing the public policy against corporate practice of medicine, the court said: "However, this principle is not contravened by permitting a group of interested persons to form a non-profit corporation to secure for themselves medical services at a low cost."

LETTERS to the Editor . . .

ON PAGE 26 [Advertising Section] of CALIFORNIA MEDICINE for July 1954 is quoted an extract from the J.A.M.A. entitled "Children Should Be Taught to Be Right Handed." I doubt the validity of quoted premises. "The infant has no definite sidedness either left or right; he is ambi-lateral, not ambidextrous, and both sides are inept." "A one sided pattern begins to emerge at about 18 months and continues to develop for many years as one sided skills are learned." I question these statements.

I have long understood that right or left handedness is an intrinsic matter. Many years ago I was taught a simple test to determine whether a person is *naturally* right or left handed. Extend the arm from the body with the forefinger extended, the other fingers and thumb closed as if pointing a pistol. With both eyes open and focused on the aiming point, aim the finger at an object 30 feet or so distant, and then close one eye. Regardless of which hand one is pointing with, if upon closing one eye one finds the open eye looking down the finger at the aiming point the open eye is on the side of natural handedness.

For instance, if a naturally right handed person aims with his right forefinger, as above, and closes

the left eye the right eye will be found looking along the finger directly at the aiming point. If the left eye is left open and the right eye closed the finger will appear to be pointing to the right of the aiming point.

In the case of a naturally left handed person who has been trained from infancy to use the right hand, the foregoing test will reveal that he aims with the left eye instead of the right. The pistol expert, who aims with both eyes open is usually unaware of which eye he is actually aiming with.

Many years ago a friend of mine on the police force was a pistol expert. He believed that he was right handed, and wrote and shot with his right hand. He lost his right thumb and was thus forced to shoot with his left hand. He quickly developed into an even better marksman shooting left handed than he had been shooting right handed. The aiming test outlined above indicated that he was naturally left handed.

Yours sincerely,

JOHN H. SCHAEFER, M.D.

525 South Flower
Los Angeles 17, California

CALIFORNIA MEDICAL ASSOCIATION

Annual Meeting

SAN FRANCISCO

May 1-5, 1955

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) not later than November 20, 1954.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association not later than December 1, 1954. (No exhibit shown in 1954, and no individual who had an exhibit at the 1954 session, will be eligible until 1956.

Medical Motion Pictures

Applications are now being received for the program of the Medical Motion Pictures Section. Please submit your application to Arthur E. Smith, M.D., Chairman, Medical Motion Pictures Section, 1930 Wilshire Boulevard, Los Angeles 57, California.

SCIENTIFIC PAPERS

SCIENTIFIC EXHIBITS

MEDICAL MOTION PICTURES

PLANNING MAKES PERFECT

AN EARLY START HELPS

SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY Ben C. Eisenberg
2680 Saturn Avenue, Huntington Park

ANESTHESIOLOGY John P. Howard
2558 4th Avenue, San Diego 3

DERMATOLOGY AND SYPHILOLOGY . R. Raymond Allington
3115 Webster Street, Oakland 9

EYE, EAR, NOSE AND THROAT—

ENT Francis A. Sooy (Chairman)
490 Post Street, San Francisco 2

EYE Robert N. Shaffer
490 Post Street, San Francisco 2

GENERAL MEDICINE Roger O. Egeberg
Wadsworth General Hospital, Los Angeles

GENERAL PRACTICE Stanley R. Parkinson
326 G Street, Marysville

GENERAL SURGERY Lyman A. Brewer, III
2010 Wilshire Boulevard, Los Angeles 57

INDUSTRIAL MEDICINE AND
SURGERY Homer S. Elmquist (Asst. Secretary)
629 S. Westlake, Los Angeles 57

OBSTETRICS AND GYNECOLOGY George Judd
2010 Wilshire Boulevard, Los Angeles 57

PATHOLOGY AND BACTERIOLOGY Orlyn B. Pratt
312 North Boyle Avenue, Los Angeles 33

PEDIATRICS Milo B. Brooks
1015 Gayley Avenue, Los Angeles 24

PSYCHIATRY AND NEUROLOGY Knox H. Finley
450 Sutter Street, San Francisco 8

PUBLIC HEALTH E. M. Bingham
130 South American, Stockton

RADIOLOGY Merrell A. Sisson
450 Sutter Street, San Francisco 8

UROLOGY Wilson Stegeman
1166 Montgomery Drive, Santa Rosa

In Memoriam

ALLEN, ERNEST G. Died in Patterson, September 2, 1954, aged 68, of coronary artery disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1923. Licensed in California in 1923. Doctor Allen was a member of the Stanislaus County Medical Society.



ALLEN, FREDERICK W., JR. Died in Pacific Beach, August 10, 1954, aged 34. Graduate of the University of Illinois College of Medicine, Chicago, 1944. Licensed in California in 1949. Doctor Allen was a member of the San Diego County Medical Society.



CALLAWAY, JAMES W. Died in La Jolla, June 25, 1954, aged 46, of carcinoma of the pancreas. Graduate of Northwestern University Medical School, Chicago, Illinois, 1932. Licensed in California in 1934. Doctor Callaway was a member of the San Diego County Medical Society.



CASE, ROBERT B. Died in Santa Cruz, August 24, 1954, aged 44, of coronary artery disease. Graduate of Washington University School of Medicine, St. Louis, Missouri, 1937. Licensed in California in 1937. Doctor Case was a member of the Santa Cruz County Medical Society.



COYLE, JAMES D., SR. Died in Sacramento, August 14, 1954, aged 59, of cerebral vascular accident. Graduate of St. Louis University School of Medicine, Missouri, 1921. Licensed in California in 1921. Doctor Coyle was a member of the Sacramento Society for Medical Improvement.



DAGGETT, EARL H. Died in Oakland, September 4, 1954, aged 81. Graduate of the Oakland College of Medicine and Surgery, California, 1909. Licensed in California in 1909. Doctor Daggett was a member of the Alameda-Contra Costa County Medical Association.



HARRISON, ELAKE. Died in San Francisco, September 9, 1954, aged 60. Graduate of Columbia University College of Physicians and Surgeons, New York, 1919. Licensed in California in 1922. Doctor Harrison was a member of the Los Angeles County Medical Association.



HART, ADEN C. Died in San Francisco, August 27, 1954, aged 86. Graduate of Cooper Medical College, San Francisco, 1891. Licensed in California in 1891. Doctor Hart was a retired member of the Sacramento Society for Medical Improvement, the California Medical Association, and an associate member of the American Medical Association.



JOHNSON, MURREY L. Died in Piedmont, August 14, 1954, aged 94. Graduate of Cooper Medical College, San Francisco, 1887. Licensed in California in 1888. Doctor Johnson was a retired member of the Alameda-Contra Costa Medical Association, the California Medical Association, and an associate member of the American Medical Association.



MCCRADIE, ROBERT D. Died in Oakland, August 7, 1954, aged 65, of myocardial infarction. Graduate of the University of Illinois College of Medicine, Chicago, 1920. Licensed in California in 1921. Doctor McCradie was a member of the Alameda-Contra Costa Medical Association.

MESSINGER, HERBERT B. Died in San Francisco, July 29, 1954, aged 53. Graduate of McGill University Faculty of Medicine, Montreal, Quebec, 1931. Licensed in California in 1947. Doctor Messinger was a member of the Napa County Medical Society.



MORRIS, LAIRD M. Died in San Francisco, August 15, 1954, aged 64. Graduate of the University of California Medical School, Berkeley-San Francisco, 1916. Licensed in California in 1916. Doctor Morris was a member of the San Francisco Medical Society.



NAST, ERNEST H. Died in Soquel, August 26, 1954, aged 68. Graduate of the Chicago College of Medicine and Surgery, Illinois, 1914. Licensed in California in 1914. Doctor Nast was a retired member of the Santa Cruz County Medical Society, the California Medical Association, and an associate member of the American Medical Association.



PATTERSON, GILBERT L. Died in Santa Rosa, July 30, 1954, aged 59. Graduate of the University of California Medical School, Berkeley-San Francisco, 1922. Licensed in California in 1922. Doctor Patterson was a member of the Sonoma County Medical Society.



ROADRUCK, R. DAVIS. Died in San Francisco, August 20, 1954, aged 48, of coronary artery disease. Graduate of the University of Nebraska College of Medicine, Omaha, 1933. Licensed in California in 1949. Doctor Roadruck was an associate member of the Sonoma County Medical Society, the California Medical Association, and the American Medical Association.



RUNCKEL, GEORGE H. Died recently in Portland, Oregon, aged 79, of carcinoma of the intestine. Graduate of Cooper Medical College, San Francisco, 1908. Licensed in California in 1908. Doctor Runckel was a retired member of Siskiyou County Medical Society, the California Medical Association, and an associate member of the American Medical Association.



STOCKTON, ANDREW B. Died in Kentfield, September 7, 1954, aged 54. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1928. Licensed in California in 1928. Doctor Stockton was a member of the San Francisco Medical Society.



TITUS, CHARLES I. Died in Sacramento, September 7, 1954, aged 78. Graduate of the Denver and Gross College of Medicine, Colorado, 1905. Licensed in California in 1922. Doctor Titus was a life member of the Sacramento Society for Medical Improvement.



WOODWARD, DEAN S. Died in Watsonville, August 7, 1954, aged 68, of coronary artery disease. Graduate of St. Louis University School of Medicine, Missouri, 1914. Licensed in California in 1914. Doctor Woodward was a member of the Santa Cruz Medical Society.



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

A NEW COMMITTEE added to the Auxiliary program last year was the Committee on Mental Health. Under the chairmanship of Mrs. Leland S. Lewis of Bakersfield, the groundwork was laid in county units of the Auxiliary for programs of self-education on mental health facilities and resources in their respective communities. This year Mrs. Clayton E. Brock of San Jose is state chairman, and the counties are being urged to appoint special committees on mental health.

The American Medical Association reminds us that the number one health problem in America today is the nine million men, women and children who have some form of mental illness. That total is more than the combined total of people stricken with poliomyelitis, cancer and tuberculosis.

* * *

VISITS TO STATE MENTAL HOSPITALS

Three of our county Auxiliaries have been interested in state mental hospitals for several years. Members from Ventura and Santa Barbara pay an annual visit to the Camarillo State Hospital and have luncheon in the hospital ward dining rooms. Members of the nursing staff take them on a tour of the hospital, and as a result the Auxiliary women have a better understanding of the therapy, environment and life of patients in a mental institution.

The Solano County group has made several visits to the California State Mental Hospital at Imola and has had speakers from there at some of its meetings. Part of the proceeds from the Solano County Auxiliary's annual rummage sale goes for occupational therapy supplies for the children's wards at Imola.

* * *

CIVIL DEFENSE PROJECTS

Mr. Joseph Stetler, secretary of the Council on National Emergency Medical Service of the American Medical Association, admits that any program on civil defense meets with apathy in most communities. He has urged the active cooperation and support of the Auxiliary in carrying out the plans and programs of the A.M.A.

Mrs. Louis C. Olker of Chico, chairman of civil defense for the State Auxiliary, has been working in close cooperation with the C.D. office in Sacramento in setting up a program of direct action at the family and neighborhood and community level.

ANOTHER NATIONAL CHAIRMANSHIP FOR CALIFORNIA

Mrs. Raleigh W. Burlingame of San Diego, a past state president, is serving her second term as western regional chairman for the American Medical Education Foundation. Another good reason why our county units must work hard to meet their quota of \$1 per member for this worthwhile fund!

* * *

FRIENDLINESS WINS NEW MEMBERS

The Fresno County Auxiliary has a unique and successful plan for promoting friendliness and warm hospitality for its new members. There a "Big Sister" is assigned to each new member and the Big Sister sponsors that member during the whole year. Not only does this plan increase the membership, but it enlists the new members into active participation in the Auxiliary's projects and activities.

The San Mateo County Auxiliary also makes special efforts in welcoming new members. Transportation to the meetings is provided, and when each new member is introduced to the group she receives a corsage while the chairman gives a brief biography of her. Then the new member is immediately assigned to a committee and is made to feel that she is an important member of the Auxiliary.

Mrs. Paul C. Blaisdell of Pasadena, first vice-president, is chairman of Membership and Organization. She points out that when we become Auxiliary members, we enter into active partnership with our husbands in the all-important business of providing our communities with the best possible medical services.

"The rewards of this partnership come from building confidence and greater understanding in our communities between the public and the medical societies; and further reward comes from the fine friendships we build among doctors' wives everywhere, working for the same ideals in the common cause," states Mrs. Blaisdell.

The slogan of the membership committee is "Be a member and get a member." Our ultimate goal is to have every eligible doctor's wife an Auxiliary member. Won't you help us to come a little closer to that goal this year?

MRS. FREDERICK J. MILLER, *President*

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

A grant of \$144,473 for continuation of studies on the purification of the poliomyelitis virus, which are being carried on at the University of California Virus Research Laboratory, has been awarded by the National Foundation for Infantile Paralysis. The work is under the supervision of Dr. Wendell M. Stanley, Nobel prize winner, who is director of the Research Laboratory.

LOS ANGELES

The Sixth Annual Scientific Assembly of the **California Academy of General Practice** will be held at the Hotel Statler in Los Angeles, October 24-27, 1954. A total of twenty papers will be presented. Among the speakers are: Robert Greenblatt, M.D., professor of endocrinology, Medical College of Georgia; Carlo Scuderi, M.D., associate professor of surgery, University of Illinois; Walter C. Alvarez, M.D., senior consultant emeritus, department of medicine, Mayo Clinic; Danely P. Slaughter, M.D., director of the tumor clinic, University of Illinois; Hans H. Hecht, M.D., associate professor of medicine, University of Utah; A. E. Hansen, M.D., chairman, department of Pediatrics, University of Texas; and William M. M. Kirby, M.D., associate professor of medicine, University of Washington.

A complete program and reservation information may be obtained by writing to Merlin L. Newkirk, M.D., president, California Academy of General Practice, 461 Market Street, San Francisco 5.

* * *

The **California League for Nursing** and the Student Nurse Association of California will meet for the second annual convention at the Ambassador Hotel in Los Angeles on October 28, 29 and 30. Highlights of the program will be a symposium on the subject "Community Responsibility and Contribution to Nursing" and a panel discussion on "Professional Nursing Responsibilities" as viewed by a staff physician, hospital administrator, medical educator, patient, student nurse and professional nurses from various fields.

* * *

A new speech and hearing clinic has begun operation on the Los Angeles campus of the College of Medical Evangelists as a part of the White Memorial Clinic. Designed to provide treatment for all types of speech disorders, this new service will be under the direction of Charles D. Shopwin, M.A., speech pathologist. It will also serve as a diagnostic and rehabilitation center.

SAN FRANCISCO

Seminars sponsored by the Medical Alumni Committee of Children's Hospital will be presented again in 1954-55. All-day sessions will be held at the hospital on selected

Saturdays during the fall and winter, each beginning at 9:30 a.m. Dates and subjects are:

October 23—Hematology, with special emphasis on etiology, diagnosis and treatment of commonly encountered anemias.

December 4—Orthopedic problems of infancy and childhood; early detection and management.

January 22—The management of metabolic disturbances commonly encountered in practice.

February 26—The allergic dilemma.

March 26—Infections and their management.

Members of the American Academy of General Practice may apply the course against the Academy's requirement of accredited study.

A fee of \$15 for the series of five or \$5 for a single seminar will be charged. Inquiries may be addressed to: Gertrude F. Jones, M.D., chairman, Medical Alumni Committee, Children's Hospital, 3700 California Street, San Francisco 18.

GENERAL

The National Foundation for Medical Education recently made grants in aid of medical education, totaling \$110,060, to four California medical schools.

The awards were as follows: Stanford University, \$26,860; University of California, \$24,958; University of Southern California, \$24,598; and College of Medical Evangelists (Los Angeles), \$33,643.

The grants were among 80 the nation over made by the National Fund for a total of \$2,176,904.

S. Sloan Colt, president of the Fund, said that added to these grants were gifts of individual physicians to specified medical schools. Mr. Colt explained that business corporations contribute through the National Fund's committee of American Industry, while the doctors contribute through the American Medical Education Foundation, set up by the American Medical Association.

With the latest grants, the total grants since 1951 add up to: Stanford, \$84,537.92; California, \$82,702.34; USC, \$80,337; and College of Medical Evangelists, \$98,436.

* * *

The fortieth annual Clinical Congress of the American College of Surgeons will be held in Atlantic City, New Jersey, November 15 to 19.

* * *

The nineteenth annual convention of the National Gastroenterological Association and the first annual convention of the American College of Gastroenterology will be held at the Shoreham in Washington, D. C., on October 25, 26 and 27, 1954. Copies of the program may be obtained by writing to: National Gastroenterological Association, 33 West Sixtieth Street, New York 23, N. Y.

* * *

Dr. Arthur R. Twiss, of Oakland, past president of the Alameda County Heart Association, was elected president of the **California Heart Association** at its annual meeting held in Santa Barbara, June 5-6. Attendance at the meeting, the first held independently by the organization, was 150 persons. Previously the Heart Association had held its annual meetings at the time and place of the annual sessions of the California Medical Association.

Other officers elected were: vice-president, Dr. Frederick Kellog of Long Beach; secretary, Dr. George K. Wever of Stockton; and treasurer, Mr. Daniel G. White of San Francisco.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Fall schedule:

Application of Principles of Industrial Medicine to Private Practice—October 13 to December 8, 1954.

Anesthesiology—November 4 to 5, 1954.

Dermatology in General Practice—November 10 to December 15, 1954.

In Riverside:

Problems in Anesthesia—October 20, 1954.

In Long Beach:

Cardiology—November 4, 11, 18, 1954.

Office Gynecology—January 6, 13, 20, 1954.

Contact: Mrs. Margaret H. Griffith, Assistant Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Symposium on Endocrine Diseases and Geriatrics

Date: October 22, 23, 24 (week-end), University of California Extension Building, 540 Powell Street, San Francisco. A review of recent developments in both fields, with suggestions for the management of patients past the age of fifty.

Contact: Stacy R. Mettier, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22, California.

CALIFORNIA MEDICAL ASSOCIATION, POSTGRADUATE ACTIVITIES

A Circuit Course of Postgraduate Lectures will be given in the Sacramento Valley cities of Dunsmuir, Chico, Marysville, and Auburn, during the fall months of 1954. Lecturers are from the faculty of Stanford University Medical School. The weeks of November 1 to 4, Selected Topics in Obstetrics and Gynecology, Dr. Lyman Stowe; November 15 to 19, Antibiotics, Dr. Lowell A. Rantz; December 6 to 9, Practical Problems in Clinical Endocrinology, Dr. Francis Greenspan.

A Circuit Course of Postgraduate Lectures will be given during the fall months of 1954 in the North Coast County cities of Eureka, Ukiah, Woodland and Napa. Lecturers are from the faculty of the University of California School of Medicine. The weeks of November 1 to 4, Use of Drugs for Hypertension, Dr. Alvan Hambly; November 15 to 18, Neurosurgical Problems as the Result of Accident; December 6 to 9, Practical Diagnosis and Treatment of Cardiac Arrhythmias, Norman J. Sweet.

Contact: C. A. Broadus, M.D., Director of Postgraduate Activities, P.O. Box AI, Carmel, California.

Medical Dates Bulletin

THIS BULLETIN of the dates of postgraduate education assemblies and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: C. A. Broadus, M.D., P.O. Box AI, Carmel, California.

OCTOBER

San Diego County Heart Association, Annual Professional Symposium on Heart Disease, Friday, October 15, H. Jack Hardy, executive director, 1651 Fourth Avenue, San Diego 1.

California Academy of General Practice, Sixth Annual Scientific Assembly, Los Angeles, October 24, 25, 26, 27, Wm. W. Rogers, executive secretary, 461 Market Street, San Francisco.

Orthopaedic Hospital, Comprehensive Five-day Course in Poliomyelitis, October 25 to 29, 1954, C. L. Lowman, M.D., 2400 S. Flower Street, Los Angeles 7.

NOVEMBER

Los Angeles Urologic Research Convention, Los Angeles, November 8-12.

JANUARY

American College of Surgeons, Palm Springs, January 21-22, 1955.

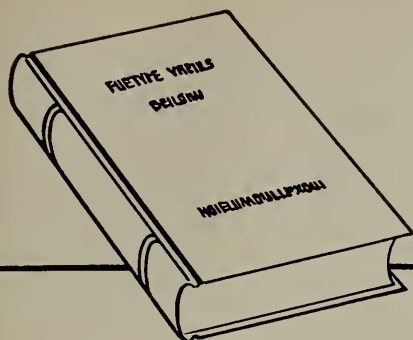
CALIFORNIA MEDICAL ASSOCIATION, Annual Session, San Francisco, May 1-5, 1955.

AMERICAN MEDICAL ASSOCIATION

Clinical Session, 1954, Miami, November 30-December 3.

Annual Session, 1955, Atlantic City, June 6-10.

Clinical Session, 1955, Boston, November 29-December 2.



THE PHYSICIAN'S *Bookshelf*

LUNG CANCER. Seymour M. Farber, M.D., Associate Clinical Professor of Medicine, U. C. School of Medicine. Charles C. Thomas, publisher, Springfield, Ill., 1954. 157 pages, \$4.75.

There is no doubt that the problem of lung cancer is increasing, and that it is already at a point where it offers a challenge to the general practitioner. In an attempt to help him meet that challenge, Dr. Farber has prepared this monograph. It begins with a simple, lucid explanation of the current concepts of etiology and histopathology, and proceeds to an excellent discussion of the attitude with which the problem should be faced, and the essential features of diagnosis which should be employed by the physician in searching for possible lung cancer, which is symptomatic. Unfortunately, nothing is said about the techniques for discovering the so-called "silent" lesion which is either non-symptomatic or only vaguely so. It is true that later on in the monograph the author does speak of the possibility of using sputum examinations for malignant cells as a possible survey technique, but does *not* speak of the use of periodic x-rays for that purpose.

There is a very good section on the use of the fluoroscope and roentgenology in diagnosis, although one wonders from whence comes the author's enthusiasm for bronchography. Most diagnosticians find it only occasionally helpful in searching for a lung cancer and hesitate to use it because of the residual iodized oil which obscures further x-ray studies.

The section on cytological studies is, of course, excellent, since the author is an authority in that field. Also commendable is his advice to the physician concerning the care of the patient whose disease has progressed to a point where no therapy, either surgical or otherwise, can be used. Only the chapter on surgery is inadequate, and this inadequacy may be due to the "autopsy table" background of the author's material. This material consists of 1070 cases from 19 California hospitals, 61 per cent of whom were undiagnosed before autopsy. His surgical background appears to be limited to a review of 241 surgical cases, only 26 of whom were from private hospitals or physicians. The value of this monograph to the general practitioner would have been considerably enhanced had the author presented a fairer and less pessimistic appraisal of the role which surgery can play in the therapy of cancer of the lung. This might have been done had the author sought the collaboration of an experienced thoracic surgeon in preparing the chapter on surgery.

The book can be unhesitatingly recommended to those physicians who share the author's philosophy regarding cancer of the lung, which is well described in the introduction by J. Arthur Myers in the following words: "Although he recognizes that the only successful treatment of cancer of the lung today is surgical extirpation, the author, like many other workers in this field, has a deep conviction that further treatment of pulmonary cancer will be with drugs."

MICROBIOLOGY AND PATHOLOGY—Fifth Edition. Charles F. Carter, B.S., M.D., Director, Carter's Clinical Laboratory, Dallas; and Alice L. Smith, A.B., M.D., Assistant Professor of Pathology, Southwestern Medical College of the University of Texas. The C. V. Mosby Co., 1953. 847 pages, 260 illustrations, \$5.50.

This fifth edition of a combined book on Microbiology and Pathology grew out of an earlier edition on "Bacteriology for Nurses" first printed in 1928. The first 463 pages of the total 810 pages of text cover admirably, in 35 chapters, fundamentals of bacteriology, parasitology and immunology in an exceptionally interesting manner. At the end of each chapter is printed a set of questions concerning the material covered. The content is completely up-to-date and includes a good description of the common antibiotics and an excellent description of the action of various chemicals used as disinfectants. Particularly useful and well done is the discussion of the practical methods of sterilization and disinfection as conducted by nurses and physicians in everyday hospital and office practice. Lucid discussion of immunological problems makes easy reading of a usually dull subject. Information concerning the morphology, cultural characteristics, manner of infection and control of disease caused by pathogenic bacteria, fungi and animal parasites is presented in a fashion so readable that your reviewer was loathe to lay down the book until he had finished this portion. Medical students, and physicians as well as nurses, can gain a mint of up-to-date information in these chapters. Excellent chapters cover viruses and Rickettsia and diseases caused by them. The final chapter of this well-written first part is a summary of the method of inoculation to prevent disease as recommended by the American Public Health Association and the American Academy of Pediatrics.

The second part of the book is another attempt to present to nurses fundamentals of general and special systemic pathology. This portion compares favorably with other books on the market but fails somehow to have the authority of the first part of the volume. The illustrations are nearly all taken from other books. Many represent advanced lesions seldom seen in this day and age. On a whole, the material presented in an orthodox fashion is factual but occasionally one reads a statement which is not true—such as "Gallstones are of frequent occurrence in the feces." Most of the text, however, is quite satisfactory. A handy glossary of terms which takes up fully 28 pages concludes the book.

This well-printed book should serve satisfactorily as a very useful text for nurses and others studying microbiology or fundamentals of pathology.

* * *

BABIES NEED FATHERS TOO. Rhoda Kellogg. Comet Press Books, 11 West 42nd St., New York 36, 1953. 256 pages, \$3.50.

Rhoda Kellogg states that she was prompted to write this book because every day she hears complaints from mothers of nursery school children that their husbands will not read any books on child psychology. Because it is her conviction that children from birth on need fathers who are as close

and real as their mothers, and that American children generally need more fathering, she has attempted in this book "to give the busy man a chance to catch up with his wife's latest notions and develop some that may be new to her."

Mrs. Kellogg is the director of the Golden Gate Nursery Schools in San Francisco. Her book clearly shows that she not only is familiar with modern theories and knowledge concerning the development and socialization of children, but that she herself has had extensive experience with preschool children. In addition to this, the book is simply and interestingly written.

The book begins with a discussion of the role of the father in family living, attempting to give him a deeper understanding of the significance of present day father-mother and parent-child relationships. It also attempts to contribute to his understanding of his children's feelings and behavior by directing his thoughts back into his own early life and analyzing the source of his own feelings in his early relationships to his parents. The book then goes on to describe from the dynamic standpoint, the development and behavior of the child at his various stages of development, giving, as it goes along, not only the theoretical background necessary to understand what is taking place and why, but also drawing conclusions and giving advice. The latter half of the book consists of chapters on such subjects as the problems of the first child, those of the second, sex education, "Why Children Misbehave," "Why Children Get Sick," the proper choice of toys, and "How Fathers Can Correct Their Mistakes" and "Rate Themselves."

It is the reviewer's opinion that any thoughtful, psychologically oriented father who is interested in playing an effective role in the upbringing of his children will find this book stimulating, illuminating, and helpful. Doubtless, as the author recognizes, it will arouse strong negative feelings in some men, and some will disagree with many of its premises and conclusions. Probably most fathers who have had no psychological orientation should, after reading the book, have an opportunity to deal with their aroused feelings through individual or group discussions with child guidance trained personnel.

* * *

THE CHILD, HIS PARENTS AND THE PHYSICIAN. Hale F. Shirley, M.D., Professor of Pediatrics and Psychiatry, Director of the Child Psychiatry Unit, Stanford University School of Medicine, Charles C. Thomas, publisher, Springfield, Illinois, 1954. 159 pages, \$3.75.

This monograph is a very readable presentation of material presented in recent years by the author to medical students, members of the pediatrics house staff, general practitioners and pediatricians on the emotional growth and behavior of the normal child. In it he presents in simple and nontechnical language those basic concepts which he feels are essential to an understanding of the child and his social adjustment.

Simple diagrams are employed to graphically illustrate many of the concepts. In a chapter on developmental goals, summary tables for each stage from infancy through late childhood nicely condense the main points of the discussion.

The book is especially suited to the physician who has not had intensive training in child guidance, but whose everyday practice brings him in contact with situations requiring a comfortable orientation in that field. It is also considered suited to teachers, nurses and many parents.

* * *

ACUTE PULMONARY EDEMA. Mark D. Altschule, M.D., Assistant Professor of Medicine, Harvard Medical School. Grune & Stratton, Inc., New York, 1954. 68 pages, \$3.50.

This excellent, brief work consists of a review of the clinical manifestations, basic physiologic considerations,

pathologic physiology and treatment of acute pulmonary edema. Inadequacies of the widely held concept that this state is principally a sequel of left ventricular failure are explored. An adequate index and bibliography are included. This monograph should find wide acceptance.

* * *

THORACIC SURGERY — Second Edition. Richard H. Sweet, M.D., Associate Clinical Professor of Surgery, Harvard University Medical School. Illustrations by Jorge Rodriguez Arroyo, M.D., formerly assistant in surgical therapeutics, University of Mexico Medical School. W. B. Saunders Company, Philadelphia, 1954. 381 pages, \$10.00.

This book takes up in an orderly, easily-read style the accepted surgical procedures which can be performed in or through the thorax. The illustrations are excellent and omit much of the confusing and unnecessary detail found in other texts. Pre- and postoperative care and technique are covered with a minimum of stress on indications or contra-indications. The general surgeon who might occasionally find himself forced to enter the chest would find this a very valuable reference. The intern or resident interested in thoracic surgery will find this text to be of great assistance to him in understanding the anatomy and to a lesser degree the physiology of the thorax and to enable him to follow the technique of the standard thoracic procedures.

The thoracic surgeon probably will benefit very little from this text in that it has a rather wide scope with a minimum of detailed description of those techniques which are not already standardized, well known, and treated in more adequate detail elsewhere in the medical literature.

* * *

LECTURES ON THE THYROID. J. H. Means, M.D., Jackson Professor of Clinical Medicine, Professor Emeritus, Harvard University. Harvard University Press, Cambridge, 1954. 113 pages, \$3.00.

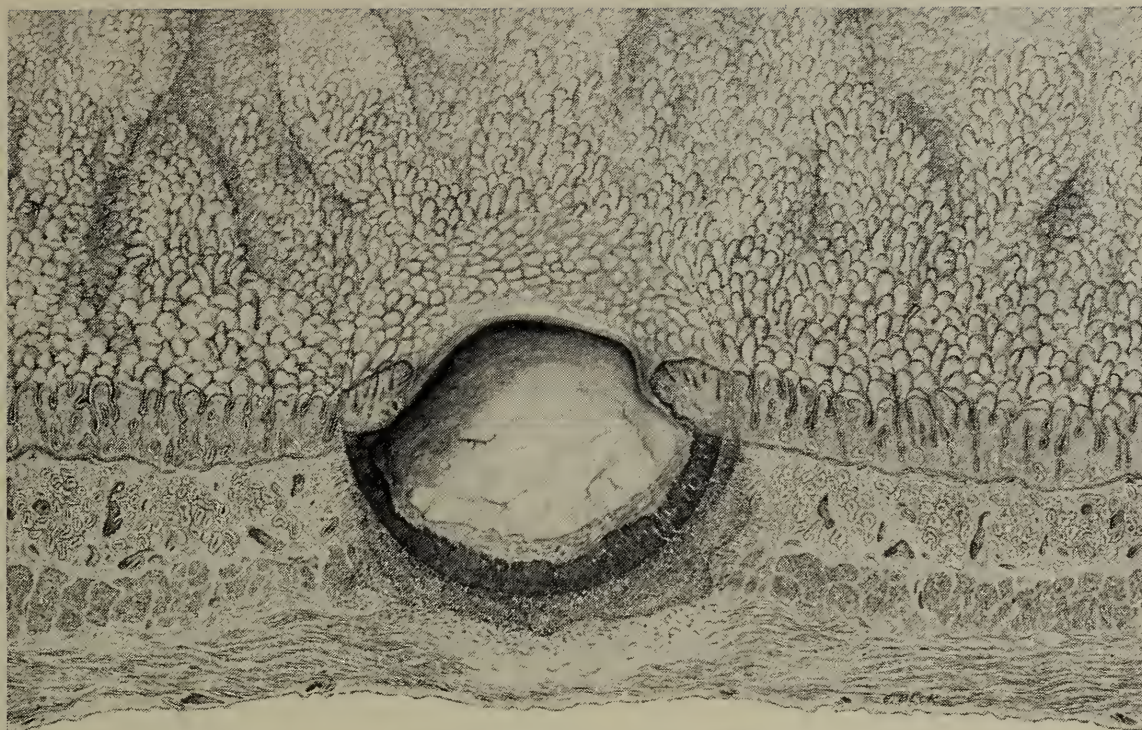
This neat volume is a collection of five lectures on the thyroid given by Dr. Means at various times and places. No one is more qualified to survey the subject than Means, whose work as head of the thyroid clinic at the Massachusetts General Hospital for many years is known and admired by all. These lectures are in a sense a summary of Dr. Means' credo; one can see how they have developed as a result of infinite thought on the subject. Beginning with the wide sweep of the integrative action of the endocrine system we go on to the thyroid hormone and then to more clinical matters of thyroid disease. The whole subject is developed with historical sense which Dr. Means can so well do, having, as it were, lived through most of it. This small volume serves as an excellent supplement to Means' large book on the thyroid so well known to all.

There is an index and a number of interesting diagrams.

* * *

THE BIOCHEMISTRY OF CLINICAL MEDICINE. William S. Hoffman, Ph.D., M.D., Professorial Lecturer in Medicine, University of Illinois College of Medicine. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1954. 681 pages, \$12.00.

This represents a thorough exposition of chemistry as this science is related to the problems of medicine, an approach which reminds one of certain volumes on clinical or pathologic physiology; the present work does not suffer by such a comparison. The author has had particular experience in the fields of diabetes mellitus, renal disorders, hepatitis and gout; the pertinent sections are extensive. Contents are well arranged and the book well published, with satisfactory index and references. One may safely predict a good reception and many editions.



Cross section of active duodenal ulcer.

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1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, *Gastroenterology* 23:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, *Gastroenterology* 25:416 (Nov.) 1953.

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Emotional First Aid Needed in Disasters

You don't have to be a psychologist to give needed first aid to "emotional casualties" of a community disaster. Knowledge of a few basic rules is all that's necessary to give first aid to a physically injured disaster victim. The same is true of persons who react badly to the emotional shock of a disaster, according to the Committee on Civil Defense of the American Psychiatric Association. Its material on psychological first aid appeared in a recent issue of the *Journal of the American Medical Association*. The first need is to understand and control your own emotions and to know your abilities and limitations, so you will be in a position to help others. Then you must "accept every person's right to have his own feelings," however strange they may seem. Your job is to help the victim cope with his feelings, not to tell him how he should feel.

A casualty's emotional limitations are as real as physical ones. They must be taken into consideration, but his potentialities also must be sized up and given a chance to work.

"Unlike ordinary life, a disaster engenders more urgent jobs than there are people to do them. Opportunities to regain self-respect and self-confidence are correspondingly greater," the article said. "Psychological first aid can help many emotionally disturbed victims to take advantage of these opportunities and thereby get back into their stride."

Here are the major kinds of emotional reactions and ways to deal with them:

1. Normal: Most people show some "signs of disturbance" which are only natural. A word of encouragement in passing is worth while.

2. Individual panic: Some lose control and rush pointlessly about, and a few such persons may set off dangerous mass panic. Gentle firmness should be tried first, then firm but not brutal physical restraint. The committee debunked "the widespread belief that a casualty in panic can be jolted out of his confusion by slapping him in the face, by dousing him with cold water, or by other forms of abuse."

3. Depressed: Some persons seem to be numbed, to lose contact with the world. A few minutes talking with them, showing a real personal interest, and suggesting simple tasks to bring them back to reality will help.

4. Overly active: The man who suddenly "takes over," issues orders, and rushes from job to job without organization can hamper those who are more reliable. Giving this man a heavy job to work off physical energy, and getting him under proper supervision will help calm him.

5. Bodily reactions: An emotionally upset person "unconsciously may convert his great anxiety into a strong belief that some part of his body has ceased to function." He must be treated with consideration for his disability, made to feel you are interested, and given small jobs so he can regain composure gradually while awaiting medical help.

(Continued on Page 66)

The long and short of Bentyl's relief of nervous gut

Clinicians^{1,2} prove Bentyl is long
on effective relief... short on
unwanted side effects including
blurred vision and dry mouth.

1. McHardy and Browne: Sou. Med. J. 45:1139, 1952. 2. Lorber
and Shay: Fed. Proc. 12:90, 1952.

Complete Bentyl bibliography on request.

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Supplied: Bentyl — In bottles of 100 and 500 blue capsules, and Bentyl Syrup in pint and gallon bottles. Bentyl with Phenobarbital — In bottles of 100 and 500 blue-and-white capsules, and Bentyl Syrup in pint and gallon bottles.

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THE WM. S. MERRELL COMPANY • New York • CINCINNATI • St. Thomas, Ontario

Describes Health Behind Iron Curtain

(Continued from Front Advertising Section, Page 46)

Commenting on the report, Dr. George F. Lull, secretary and general manager of the A.M.A., said the facts stand as warning evidence to anyone who thinks state or "socialized" medicine can possibly benefit either physician or patient.

"The physician under this system inevitably must compromise his scientific integrity and his concern for the patient as an individual," Dr. Lull said. "The patient becomes a statistic. The result can be nothing but continuing declining health standards."

Nelson's report said that when the A.M.A. solidly endorsed the 1954 Crusade for Freedom drive "it no doubt had in mind the plight of its iron curtain colleagues and realized the necessity for keeping alive their determination to be free once more, a determination that can do much to unsettle the Soviet position in the captive states and thus avoid a third world war."

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Personal communication (Apr. 12, 1950)

1951 Of 119 patients treated with Azulfidine prior to 1944, 90 patients (75%) were symptom-free or considerably improved when re-examined in 1949.

Svartz, N.: *Acta. Med. Scandinav.* 141:172, 1951.

1952 In a series of 52 patients with chronic ulcerative colitis 30, or 58%, showed significant improvement after treatment with Azulfidine.

Morrison, L. M.: *Gastroenterology* 21:133, 1952.

1953 *Morrison* says: "Azopyrine [Azulfidine] . . . has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."

Morrison, L. M.: *Rev. Gastroenterology* 20:744 (Oct.) 1953.

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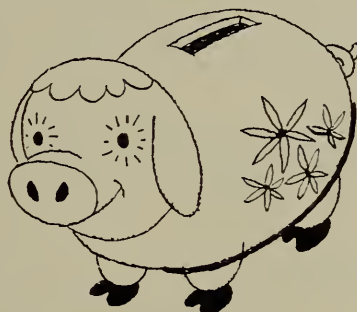
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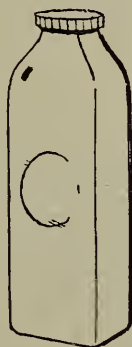


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Three Unusual Operations Near Heart Described

(Continued from Front Advertising Section, Page 50)

for the blood while a vessel is being cut have had limited application, they said.


Relief has long been sought for patients suffering gradual closure of a blood vessel like the New York patient, Drs. Cranston W. Holman and Israel Steinberg said. Although they have had only a short time to observe the patient since the operation, they said, grafting to replace the stopped-up vessel seems to be "a satisfactory method" and is worth further trial in these cases.

Emotional First Aid Needed in Disasters

(Continued from Page 54)

Medical care always should be sought for serious emotional casualties, but the goal of "first" aid is to control panic, "restore moderately disabled persons to reasonably good function in a short time or to make the more serious casualties as comfortable as possible until more complete care can be arranged for them."

The material was prepared by Drs. Calvin S. Drayer, Philadelphia; Dale C. Cameron, Washington; Walter D. Woodward, New York City, and Albert J. Glass, U. S. Army.



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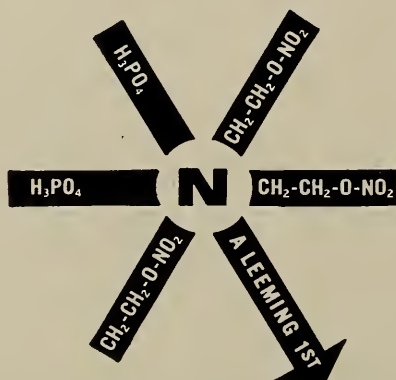
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California Gives \$100,000 to American Medical Education Foundation

A \$100,000 gift from the California Medical Association was received recently by the American Medical Education Foundation. Mr. John Hunton, executive secretary of the association, said that the donation represents a treasury grant of the C.M.A. and brings California's total income for 1954 to \$117,230, including contributions to A.M.E.F. from 255 individual California physicians. This gift elevates California to second place in state income standings of A.M.E.F. committees.

New Record for Today's Health

With the October issue, *Today's Health* will reach a circulation of over 340,000 copies, which is the highest circulation figure in its 31-year history as *Hygeia* or under its present title. A substantial part of this increase in circulation is due to the diligent efforts of the Woman's Auxiliary to the American Medical Association and their subscription projects at the national, state, and local county level. The Woman's Auxiliary has devoted a great deal of their program to the promotion of subscriptions, because they recognize that the magazine can fulfill its purpose only when it reaches the persons for whom it is written.



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Ross Hendricks, M.D.
Resident Staff

George Kowalski, M.D.
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Seymour Kolko, M.D.
Resident Staff

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Smith, Kline & French Laboratories, Philadelphia

1. Segal, M.S., et al.: Advances in the Physiology and Treatment of Bronchial Asthma, Quart. Rev. Allergy & Applied Immunology 6:399 (December) 1952.

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Uniquely palatable dosage form for the treatment of a wide range of common infections with the newest broad-spectrum antibiotic, distinguished for unsurpassed tolerance and rapid efficacy.

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Contact Lenses Can Be Worn by Most Seekers

Two-thirds of those who want the new contact or corneal lenses—even just for appearance—can wear them safely, two New York City physicians stated recently.

The lenses “should be obtained only through qualified eye doctors who will ethically advise their use only when careful study and examination prove their need and indicate they may be used,” Drs. Maurice W. Nugent and Conrad Berens wrote in a recent issue of *Today's Health* magazine, published by the American Medical Association.

The newest of these invisible lenses is the corneal lens, which is much smaller than a dime and covers only the cornea, or transparent covering of the pupil and iris. The contact lens has a central portion over the cornea and a flange extending out over the sclera, or white part of the eyeball.

The latest lenses can be worn without fluid, which was a stumbling block to earlier type of lenses. The only real hazard in the new lenses is corneal abrasion. However, they said, the minute rubbed spots heal quickly by themselves when the lenses are taken off for a while.

Persons who can wear the lenses include first those who because of accident or disease cannot see well with spectacles; those who have had cataracts removed and find lenses more satisfactory than spectacles, and those who wish them for appearance only. Once this last group was not considered, but now it makes up the largest part of all wearers.

There is no real danger in contact or corneal lenses if the patient will accept the advice of his qualified eye doctor, who examines for disease and eye muscle disorder, and accurately measures for the best type of lens. Then he supervises the important training period during which the patient learns to relax his eyelids and tolerate longer wearing periods.

About a third of all persons fitted cannot tolerate the lenses at all. Another third can wear them for special purposes for limited times—such as actors while on stage. The last third is “the fortunate group who can wear them to the exclusion of spectacles, if the lenses are well-fitted and the wearer cooperates completely with his qualified eye doctor.”

The total cost varies between \$150 and \$300, the physicians said. Because of the lengthy training period, fitting and examination, and the precision of manufacture necessary, “it is doubtful that this price can be lowered, at least at present.”

“These new type of lenses are still too far from perfection to permit their being sold to the general public by any high-pressure advertising or salesmanship,” they said. Obtaining them only through qualified eye physicians will protect the public and also “permit this type of lens development to continue without the unfavorable criticism that will come if too many people buy them only to find that their eyes won't tolerate them.”

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World War II-Contracted Leprosy Reported

A California physician recently described what appears to be the first reported case of leprosy acquired during World War II military duty.

Dr. Norman E. Levan, Bakersfield, wrote in a recent issue of the *Journal of the American Medical Association* that some cases had been expected in servicemen stationed in regions such as the Philippines, where leprosy is prevalent. Some instances of the disease "may be anticipated during the next 30 years or more in veterans of both World War II and the Korean campaign who served" in such regions, he said.

Dr. Levan's patient was stationed on New Guinea, Leyte, and Luzon during the war, and while on Luzon was quartered in a native house. There was nothing in his record to indicate his condition could have been contracted outside of military service, Dr. Levan said. The patient is being treated, and he complies with regulations for temporary "modified isolation."

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Parents Should Be Alert To Cancer in Children

Children do not have cancer as often as adults, but early diagnosis is even more important for them than for their elders.

The disease spreads and progresses more rapidly in children, and the symptoms are often confused, resembling many common childhood illnesses. Because of this, the disease may go unrecognized until it is too late for cure.

Dr. Frank L. Rector, Evanston, Ill., said in a recent issue of *Today's Health* magazine, published by the American Medical Association, that parents should be alert to these dangers. He said prompt diagnosis and treatment can save the child's life.

Cancer, when it does occur in children, follows definite patterns. From birth to five years the predominating types are cancer of the kidney, eye and central nervous system, and leukemia; from five to 10 years, leukemia and central nervous system tumors and fewer eye cancers; and from 10 to 15 years, bone tumors. From 15 to 20 years the adult types become more common, he said.

A mother may notice the signs of kidney cancer, or Wilms's tumor, when changing a diaper. The major symptom is abnormal fullness in the back on the side of the involved kidney. There is no pain and no other symptoms.

Neuroblastoma, the most common abdominal type among infants, is suggested by painless abdominal enlargement, pallor, loss of weight and some fever.

Central nervous system cancer has various symptoms depending on the part of the brain involved. In older children there may be unsteadiness of walk, disturbances of vision, headaches and upset stomach without relation to eating. There may be personality changes: "an obedient, likeable, studious and dependable child may rather suddenly develop opposite characteristics," Dr. Rector said.

Cloudiness or "cat's eye" may be a warning of an eye cancer, and cancer of the bone is a possibility when there is a painful and tender swelling in or near the joint of a long bone such as the shoulder, elbow, wrist, hip, knee or ankle.

Most moles and warts are as harmless in children as in adults. However, if a mole or wart changes to a dark color, hurts, or bleeds when irritated, it should be examined microscopically.

As with all cancer, little can be done to prevent it in children but it can be cured if discovered early, Dr. Rector said. Parents should learn that "a knowledge of the major signs and symptoms encountered in these ages is essential to recognition; and that prompt diagnosis with proper treatment as soon as cancer is found will go far toward saving the patient's life."

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New and Nonofficial Remedies: A.M.A. Council on
Pharmacy and Chemistry, J. B. Lippincott, p. 243, 1953.

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N. Y. Physician 31:20 (Jan.) 1949.

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"Home-Style" Diaper Wash Good for Hospital, Too

Tests at a Michigan University hospital nursery show that "mother knows best" about diaper care, too.

Three physicians found that the simple diaper washing routine many mothers use is a quick, safe way to sterilize diapers and help prevent the spread of bacteria that often plagues nurseries for sick infants.

They said although the problem of controlling "epidemic diarrhea" in such nurseries is not yet solved, an obvious important factor is sterile diapers. The usual techniques of hospital laundry are not satisfactory for diapers, and rinsing the used diapers before sending them to a central laundry only increases chances of infection.

So they tried ordinary home washers and dryers in a room near the nursery, first placing used diapers in a can of antiseptic solution for a few hours. Laboratory tests showed only traces of growths in a few washed batches, and no bacteria at all after thorough drying.

The report in a recent issue of the *Journal of the American Medical Association* was made by Drs. Ernest H. Watson, James L. Wilson, and Arthur Tuuri, of the department of pediatrics of the University of Michigan Medical School, Ann Arbor.

Define Officers' Membership in American Medical Association

At the American Medical Association San Francisco meeting a resolution was introduced, requesting that reserve officers of the United States Public Health Service who are on active duty be given service membership in the A.M.A. The resolution was referred to the board of trustees, which has since ruled that:

"Reserve medical officers of the United States Public Health Service on active duty are to be given the same consideration as that extended to reserve medical officers on active duty with the military forces. In other words, those officers will be exempted from payment of dues for the period beginning January 1 or July 1 following the date of the member's entrance into the service."

All such officers who hold a type of membership in the constituent medical association that permits them to vote and hold office will be eligible to hold active membership in the A.M.A. and be excused from the payment of dues. It will be necessary, therefore, for their names to be forwarded through their constituent medical society to us with the request for exemption from the payment of A.M.A. dues. During the period for which they are exempted, they are not entitled to receive the *Journal of the American Medical Association* as a benefit of

(Continued on Page 83)

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Define Officers' Membership in American Medical Association

(Continued from Page 82)

membership, but may subscribe to it, or to other A.M.A. publications. Such officers will be given active membership in the American Medical Association and not service membership.

Service members are regular, full-time medical officers in the Army, Navy, Air Force, U. S. Public Health Service, Veterans Administration, and Indian Service, and are not required to hold membership in a component and constituent association.

—The A.M.A. Secretary's Letter

Boric Acid in Talcs Can't Hurt Babies

Two New York physicians recently stated that dusting powders containing small amounts of boric acid can be used safely for babies. Infant deaths from boric acid solutions have been caused only by "ignorant" or accidental misuse of strong preparations.

Standard baby powders "carefully tested and manufactured by ethical firms" usually contain no more than five per cent boric acid. This amount cannot hurt a baby, even if dusted on irritated skin, the physicians said in a recent issue of the *American Journal of Diseases of Children*, published by the

(Continued on Page 86)



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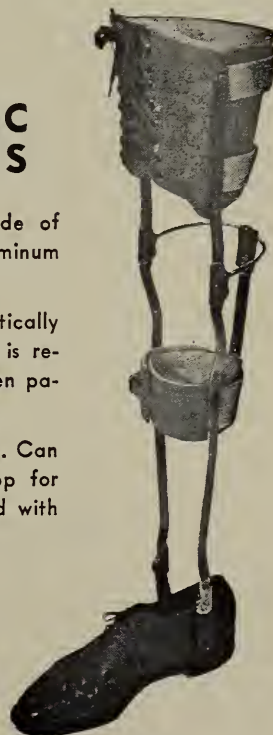
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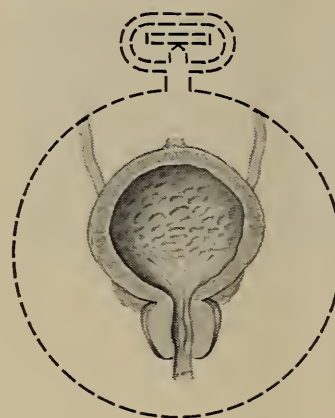




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Boric Acid in Talcs Can't Hurt Babies

(Continued from Page 83)

American Medical Association. In fact, boric acid counteracts the possibly irritating qualities of talc.

They said tests on 66 infants at the New York Foundling Hospital showed boric acid in five per cent concentrations is "practically unabsorbed through the intact skin of infants" even where there is a rash.

The "considerable attention" given in recent years to the "dangers and hazards" of misusing boric acid was "rightly inspired by the regrettable reports of accidental deaths, especially in small infants," Drs. Alfred J. Vignec and Rose Ellis said.

However, they said it is unfortunate that it has not been made clear that all deaths have been due to "accidental, ignorant and at times negligent handling" of solutions, ointments and powders contain-

ing high concentrations of boric acid. The greatest number of fatal cases have been from the accidental swallowing of boric acid by newborn infants.

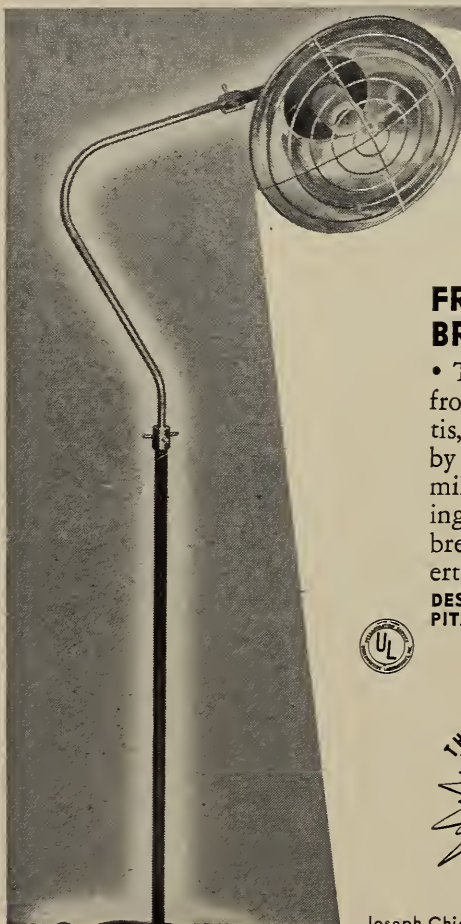
To abandon use of baby powders because of these reports is "absurd," they said. If we eliminated everything containing boron or its compounds, we would have to stop eating lamb, fish, crabs, lobsters, chicken, and eggs.

The physicians said the practical lesson to be learned is that powdered boric acid should not be dispensed "over the counter" to the public, and boric acid solutions should not be permitted where "any possibility of human error" in their administration may exist.

"This does not mean that one should abandon the use of talcs which contain small amounts of boric acid in nonabsorbable form, since there is no evidence whatsoever . . . that such products are dangerous," they said.



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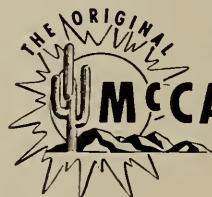
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Even Babies May Have Migraine Headaches

Babies even as young as two weeks old can suffer migraine headaches.

Symptoms of infant migraine are much like those for adults, but a positive diagnosis can't be made until the child is old enough to describe his feelings, according to Dr. Jerome Glaser, Rochester, N. Y., in a recent issue of the *American Journal of Diseases of Children*, published by the American Medical Association.

Migraine headaches usually occur periodically on one side of the head and are accompanied by visual disturbances and a variety of other symptoms. In children, they may be due to an allergy, particularly to such foods as chocolate, eggs, wheat and milk, he said.

Although two weeks is the earliest age at which migraine has been reported, Dr. Glaser said the youngest child he had ever seen with migraine was a 3-year-old girl.

"She would act as though in pain, would pat one side of her head, and would constantly repeat the single word 'hurt.' These attacks were followed by abdominal pain, nausea, and vomiting," he said.

Babies are very likely to have migraine headaches while young without being diagnosed until much later. Most migraines are found when the child is taken to the physician for some other difficulty, such as bronchial asthma or allergic reactions.

"The question . . . naturally arises as to how one can diagnose headache in infancy and early childhood," Dr. Glaser said. He explained that headache may be suggested when the child wrinkles his forehead, rubs his head, is restless, and cries. A diagnosis can only be established when he is older and complains of headache while showing the same symptoms noted in infancy.

Symptoms are very similar to those of migraine in adults, except that children usually show abdominal discomfort, loss of appetite and lack of energy before an attack while adults usually become irritable and abnormally hungry. A child may be unusually restless the night before a headache and show a gradual temperature rise up to 104 degrees in the morning. Other symptoms are distended abdomen, dizziness, bad breath, and a very definite change of behavior to sadness, excessive gaiety or definite irritability. Some children show cardiac signs — shortness of breath, pallor, sweating, and feelings of anxiety.

One of the commonest causes is eye trouble. Dr. Glaser said no child with recurrent headaches should be given up as hopeless from the standpoint of permanent relief until he has been completely checked by an eye specialist.

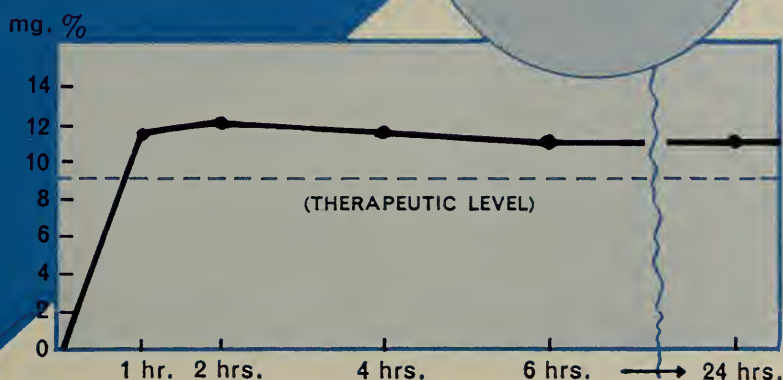
However, he said many children suffer headaches because of an allergy to certain foods. Most conspicuous are chocolate, egg, wheat and milk. He said in some cases improvement was "remarkable" when the allergy-producing foods were kept out of the child's diet.

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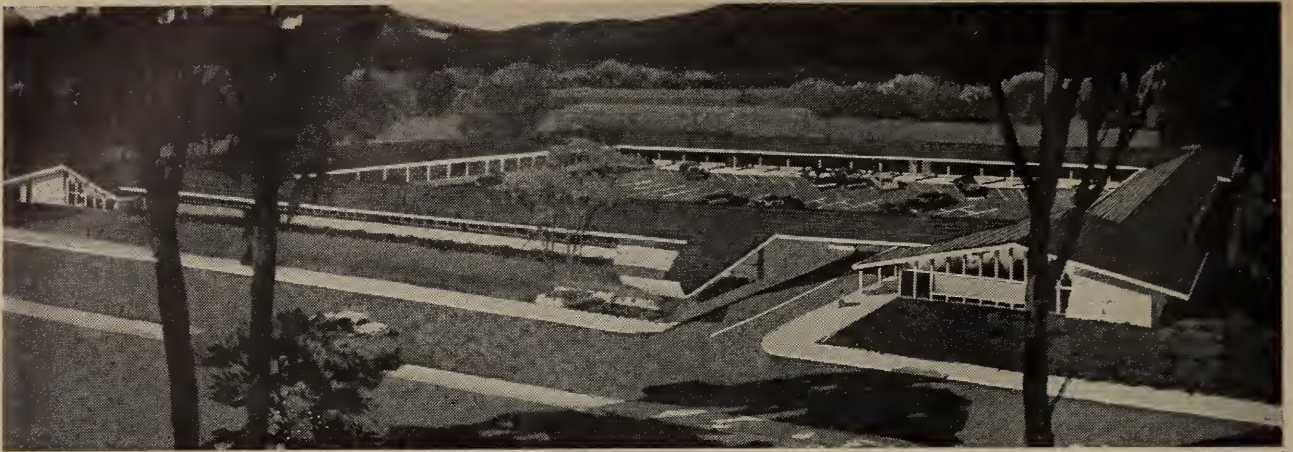
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Short or Tall, You Have Distinct Advantage

Every sized man, short, medium or tall—has a distinct advantage in social situations if he knows how to use it.

Men who worry about towering over others or looking up to them shouldn't let it become a stumbling block, Dr. John E. Eichenlaub, Ackley, Iowa, stated in a recent issue of *Today's Health* magazine, published by the American Medical Association.

"The big man bemoans the fact that his clothes go out of press and never look very snappy," he said. "The small man wishes he didn't have to make up for his unimpressive natural front by wearing flashy clothes. The medium-sized man wishes he would stand out in a crowd."

"You can keep the problem of size from bothering you if you remember that men of every size have special, valuable ways to handle people," he said.

The big man can carry his point better without extra pressure. He easily can be impressive.

"When we look at a big man, we look up to him—if he simply meets our idea of quality in his dress and manner, we find him impressive," Dr. Eichenlaub said. "If he exploits this quality, a big man doesn't have to make people sit up and take notice."

The medium-sized man's strong points are that he

can get a lot of things by familiarity and brotherly ease.

"After you've settled into a chair beside a medium-sized man, you feel more at ease and more comfortable with him than with someone at either end of the size scale," he said.

A small man can "get away with ways of attracting attention" which others cannot.

"He can argue with keenness (and even sharpness or cynicism) without giving offense," Dr. Eichenlaub said. "He can easily win sympathy and support by simply remaining modest."

Letting size become a problem is what makes "so many small men super-tough, so many big ones loud dressers and louder talkers, so many medium-sized ones braggarts and life-of-the-party types," he said. The trouble is that "friends won by a false front have to be won again when they get to know the real you." He advises remembering that "methods which spring from deep in your own personality need not fit your size."

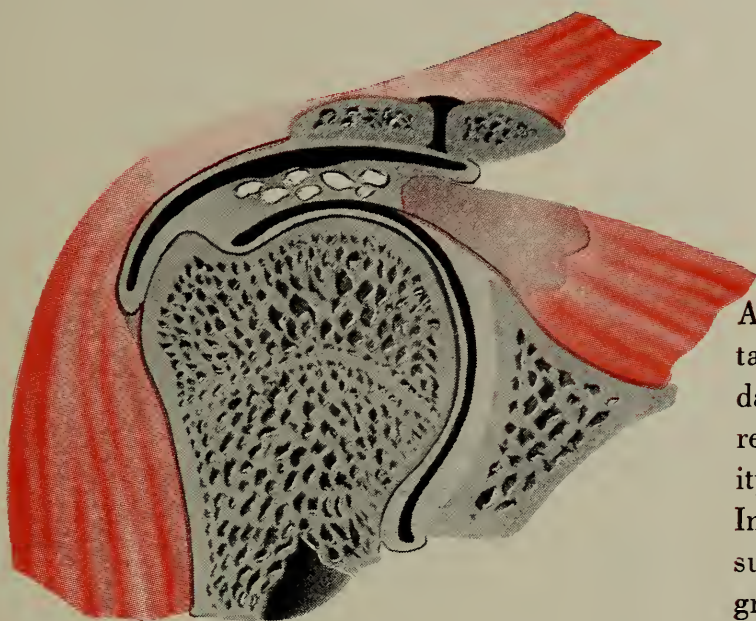
"There is such a thing as stature apart from size, and actually it is the important kind. There's no use stunting your personality by denying it simply because of your physical size. Rather, let your size help you to genuine personality and respect."

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1. Susinno, A. M., and Verdon, R. E.: J.A.M.A. 154:239 (Jan. 16) 1954.

2. Rottino, A.: Journal Lancet 71:237, 1951.

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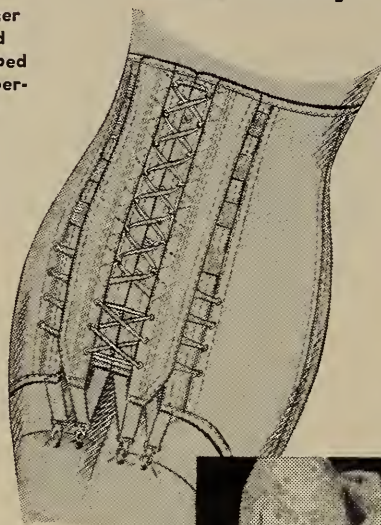
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American Medical Association Head Proposes Plans To Care for Uninsurables

The responsibility for financing the cost of illness for low-income and uninsurable persons is a local and state concern, Dr. Walter B. Martin, Norfolk, Va., president of the American Medical Association, stated recently.

In a recent issue of the *Journal of the American Medical Association*, Dr. Martin said health care costs for the noninsurable must be met by local and state aid and philanthropic funds. To lower the amount of aid needed, Dr. Martin proposed two methods: further expansion of sound voluntary insurance plans, and more chronically ill and convalescent hospitals to provide for these persons at lower per diem cost.

He said the problem must be met at this level since there can be "no acceptable or realistic standard for federal aid." Federal government participation would be "difficult to carry out without a degree of federal supervision and control that would be highly objectionable. . . . The medical needs of a person will vary with the duration and severity of his illness or disability and his immediate necessity could not be measured by any national yardstick."

Dr. Martin said pressure would be exerted to lengthen this yardstick until each year more persons would claim government assistance.

Opposition to federal aid "in no way solves the problem of providing for the health care of the uninsurable nor lessens the responsibility for working out a realistic and effective means of financing the necessary care for these persons," he said.

This uninsurable group now includes many of the 13,500,000 persons over 65, the subsistence-income groups, many chronically ill, and the more than 5,000,000 recipients of direct governmental assistance. The number of persons in these categories could be reduced to some extent from the present total of 30 to 35 million by insurance coverage for those able to buy it but not able to pay for an illness when it occurs, he said. The responsibility for those who remain uninsurable rests at the local level.

"Only at the local level can the medical needs of individuals be determined," Dr. Martin said. "Only at the local level can their economic status be assessed in relation to their medical requirements at a particular time."

Dr. Martin called for a "joining of forces" between state medical societies and hospitals in promoting sound voluntary insurance plans and providing "the means of financing the care of the uninsurable . . . at the state and local level."

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Ralph C. Teall.....	Sacramento

Other Organizations and Medical Schools

Board of Medical Examiners of the State of California

San Francisco—507 Polk Street, Room 306. (2).
Los Angeles—145 South Spring Street (12).
Sacramento—Business and Professional Building, 1020 N Street, Room 536 (14).
Secretary, Louis E. Jones, M.D., 1020 N Street, Room 536, Sacramento 14.

The Public Health League of California
Executive Secretary, Ben H. Read, San Francisco office, 530 Powell Street (2), Sutter 1-8470.
Los Angeles office, 510 South Spring Street (13), MAdison 6-6151.

Department of Public Health of the State of California

San Francisco—1122 Phelan Building, 760 Market Street (2), UNDERhill 1-8700.
Sacramento—631 J Street.
Los Angeles—State Office Building (12), MAdison 6-1515.
Director, Malcolm Merrill, 603 Phelan Building, 760 Market Street, San Francisco 2.

Medical Schools in California

University of California School of Medicine, Medical Center, San Francisco 22.
--

Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15. Dean: Windsor C. Cutting, M.D.
--

University of Southern California School of Medicine, 3551 University Avenue, Los Angeles 7. Dean: Gordon E. Goodhart, M.D.

College of Medical Evangelists School of Medicine, 312 North Boyle Avenue, Los Angeles 33. Dean: Harold Shryock, M.D.

University of California at Los Angeles, School of Medicine, Hilgard Avenue, Los Angeles 24. Dean: Stafford L. Warren, M.D.

(For roster of County Society officers, see last month's issue)

Compares British, United States Family Doctors

The American general practitioner "can and does" do a better job in many ways than the family doctor in Britain, a Scotch physician said recently.

Dr. Charles M. Fleming, after a three months' tour in the United States, reported on his comparisons in a recent issue of the *Journal of the American Medical Association*.

He said he was "impressed" with the standard of work done by most general practitioners here, the reactions of patients, and the confidence of all in the future of general practice.

The British general practitioner slowly has been displaced from his position as "family doctor" by the encroachments of socialized medicine and the growth of the clinic system and specialization, he said. Often the family doctor acts only as "a signpost directing the patient to the right hospital department," since almost all but the simplest cases are referred to hospitals for diagnosis and treatment.

This is because the British National Health Service "started at the wrong end," he said. It has made it easier for the patient to enter the hospital by raising the status of the specialist, even though "it has been pointed out that the way to run a health service efficiently and economically is to keep the patient out of the hospital whenever possible."

According to Dr. Fleming, American family doctors have better equipment and use it more; save time by using extra help, such as nurses, secretaries, and laboratory technicians, and are better off in holding some kind of hospital appointment. He said it is "generally accepted" that an American general practitioner should have the privilege of caring for his own private patients in a hospital. This practice is advocated by the American Medical Association, the American College of Surgeons, and the American Hospital Association.

He said it is easier for an American physician to enter general practice, while in Britain specialist trainees are going into general practice only because hospital staffs are filled. "So-called health centers with group practice, which were envisaged before it was realized the national health service would cost nearly \$1,400,000,000 yearly, now exist in the imagination only," he said. Group practice is commoner in the United States, giving more opportunities for greater efficiency to the "key member of the team, the family doctor." This results in better service for the patient. The scope of the American family doctor's practice is wider, and he still performs major operations, which is not done in Britain.

"The general practitioner surgeon is now unknown in Britain; he disappeared with the advent of the National Health Service in 1948," Dr. Fleming said. "In the United States, the general practitioner is encouraged to investigate and treat his patients with a full range of diagnostic and therapeutic facilities, which in Britain are available only to the hospital specialist."

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Mephate 'Robins' allays nervous tension and anxiety without dimming consciousness; and relaxes skeletal muscle spasm and tremor without impairing strength. • Mephate (0.25 Gm. of mephenesin and 0.30 Gm. of glutamic acid hydrochloride in each capsule) has been shown to be more effective clinically than mephenesin alone.

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More Interns, Residents Now in Training

There are now 75 per cent more physicians in full-time graduate training in U. S. hospitals than there were 10 years ago, it was recently reported.

On the first of this year there were about 26,000 interns and residents training in hospital staff positions, compared to about 15,000 in 1945, according to the 28th annual report of the Council on Medical Education and Hospitals of the American Medical Association. The report appeared in a recent issue of the *Journal of the American Medical Association*.

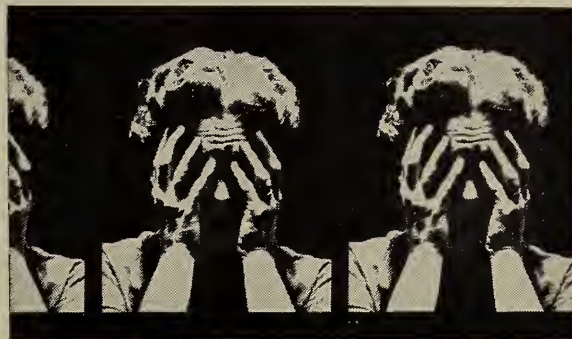
During the same period the number of openings for full-time graduate work doubled. On January 1, 1954, there were 34,172 openings compared to 16,095 in 1945. As of September 1, a total of 33,985 positions were open for the 1954-55 year, including 22,763 residencies and fellowships, and 11,222 internships. Residency openings decreased from 23,630 last year and internships increased from 11,006.

In 1945 applicants filled about 15,000, or more than 90 per cent, of the openings. In 1952-53 they filled about 74 per cent, or 26,894 of the positions. The council said this indicated a fundamental problem—the opportunities for intern and resident service had been increasing more rapidly than the number of available applicants. However, the percentage of filled positions increased to about 79 for the 1953-54 year.

The council helps provide better medical care by approving for training programs only hospitals meeting satisfactory basic educational and clinical standards. As of January 1, there were 1,347 approved hospitals offering such training. Hospitals offering internship programs increased only 7 per cent in 10 years, while the number of available positions rose 26 per cent. The council said the number of positions offered varies from year to year depending on the demand for staff members by approved hospitals. It said this suggests that careful self-appraisal by hospitals of their individual needs could result in “a sharp decline if not in the elimination of” the present excess of positions available. This appraisal should be from the standpoint “not alone of services required but of their potential for providing a worth-while educational experience for these graduates.”

About 90 per cent of the interns entered rotating programs designed to lay a foundation for general practice residencies or further specialty training. The trend toward higher pay for interns seemed to be slowing, the council said. Last year 44 per cent of the hospitals paid more than \$150 a month; this year 30 per cent paid that. However, hospitals paying more than \$200 had a lower occupancy rate for their positions than the lower-salary hospitals, indicating that the salary level “is not a decisive factor in attracting an intern staff.”

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IN THE COMMON COLD...

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Symptomatic Relief
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MULTIPLE ANTIHISTAMINE •
ANALGESIC • ANTIPYRETIC

Taken at the onset of symptoms, Multihist + APC quickly suppresses the troublesome rhinorrhea of the common cold and relieves such general symptoms as headache, backache, and other discomfort. Each capsule provides 15 mg. of the Multihist combination (5 mg. each of Pyrilamine maleate, Propenpyridamine maleate, and Phenyltoloxamine dihydrogen citrate) together with aspirin $3\frac{1}{2}$ gr., phenacetin $2\frac{1}{2}$ gr., and caffeine $\frac{1}{2}$ gr. Because each antihistamine is provided in an amount virtually incapable of producing drowsiness or lethargy, the incidence of side effects is greatly reduced. Average dose, 2 capsules initially, followed by 1 capsule at 4-hour intervals. Available on prescription through all pharmacies.

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antihistamine
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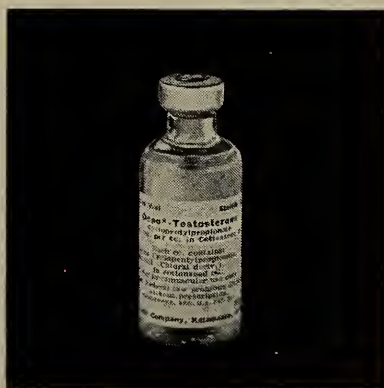
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Blood Foundation Approved Tentatively

Both the American Association of Blood Banks and the American Society of Clinical Pathologists have given "approval in principle" to a plan to establish a nationwide blood-collecting, storing, and distributing system, based on the clearing house plan used by banks to exchange funds and credits. Both groups acted at their meetings in Washington, D. C. Under the system, a blood "deposit" could be made anywhere in the country and credited to anyone in another location. The proposed "National Blood Foundation" also has the approval of the American Medical Association.

—A.M.A. Washington Letter

World Medical Association Needs Immediate Financial Support

Doctors who are members of the United States Committee of the World Medical Association now are receiving letters, citing the present financial plight of the W.M.A. and urging immediate financial support to build up a depleted treasury.

In an urgent appeal from Dr. Louis H. Bauer, secretary-treasurer of the U. S. Committee, members are being asked to talk about the W.M.A. to their friends and sign them up. The membership fee is only \$10.

"At the moment," Dr. Bauer stated, "we do not
(Continued on Page 18)

LADY LOIS DIABETIC-DIETETIC ICE CREAM

(non-sugar)

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100 GRAM PORTION CALORIE VALUE

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Butterfat	90.00 calories
Stabilizer (pure)	1.60 calories
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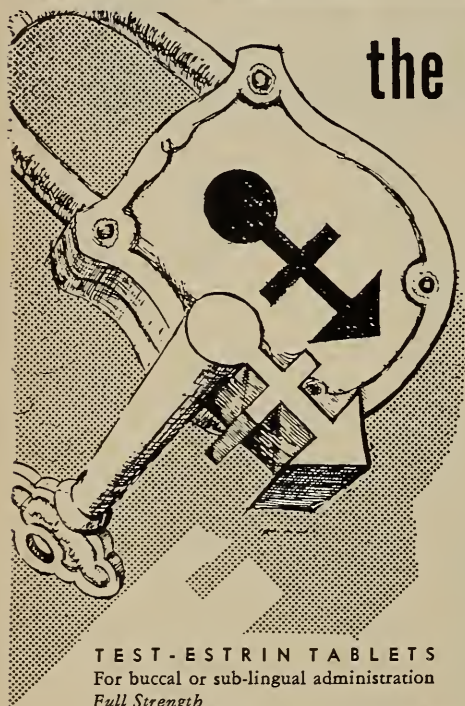
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Testosterone Crystalline 1.25 mg.



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TEST-ESTRIN *Injectable also available*

Does your community need a doctor?



If so, the physician you're looking for may be the one who's looking for you!

Sometimes there is a doctor who could be expected to examine and look for the patient who is in need of a physician. In a busy hospital or a private practice, the doctor has a tremendous amount of work to do. He is often called upon to see patients who are in need of his services. He is often called upon to see patients who are in need of his services. He is often called upon to see patients who are in need of his services.

It is not always easy to find a doctor who is willing to see patients who are in need of his services. It is not always easy to find a doctor who is willing to see patients who are in need of his services. It is not always easy to find a doctor who is willing to see patients who are in need of his services.

How do you find such a doctor? The best way is to ask for a recommendation from a friend or a family member who has been to a doctor. The best way is to ask for a recommendation from a friend or a family member who has been to a doctor. The best way is to ask for a recommendation from a friend or a family member who has been to a doctor.

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These are the faces of the human mind. They are the faces of the human mind. They are the faces of the human mind. They are the faces of the human mind. They are the faces of the human mind.

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PARKE, DAVIS & COMPANY
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PARKE-DAVIS speaks to the public...

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While the broad problem is one which admittedly challenges the skill and resourcefulness of many organizations that have the interest of Medicine at heart, Parke-Davis is proud to have a part in pioneering and developing a type of advertising approach which is proving increasingly effective in meeting this challenge. *PARKE, DAVIS & COMPANY, DETROIT 32, MICHIGAN.*



World Medical Association Needs Immediate Financial Support

(Continued from Page 14)

have sufficient funds either to handle the General Assembly or run the association for another year."

Since its founding in 1947, the W.M.A. has earned increased respect from international governmental organizations.

"But," as Dr. Bauer says, "there is a constantly growing tendency for decisions affecting all of medicine to be made at the international level. This tendency is a threat not only to the future of medicine itself, but to the rights and privileges of every practicing physician. The World Medical Association is

the only international organization which can and does speak from the nongovernmental standpoint and from the standpoint of free enterprise. It can only continue to defend your interests if it has adequate financial support."

Dr. Bauer explained that W.M.A. support from industry as a whole has decreased this year and the campaign to increase individual membership in the U. S. Committee "has not been as successful as we had hoped." Consequently, he is asking doctors all over the country to join in a renewed membership campaign. Application blanks can be secured from Dr. Louis H. Bauer, World Medical Association, 345 East Forty-sixth Street, New York 17, N. Y.

—The A.M.A. Secretary's Letter



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The Alexander Sanitarium is a neuropsychiatric open hospital for treatment of emotional states. Treatment consists of electric shock, hydrotherapy, insulin shock-therapy, psychotherapy and occupational therapy. Conditioned reflex treatment for alcoholism.

Occupational facilities consist of special occupational therapy room, tennis courts, billiards, badminton court, table tennis and completely enclosed, heated, full-size swimming pool.

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Asst. Chief of Staff
P. P. Poliak, M.D.
Asst. Chief of Staff

Ross Hendricks, M.D.
Resident Staff
George Kowalski, M.D.
Resident Staff
Seymour Kolko, M.D.
Resident Staff

A patient accepted for treatment may remain under the supervision of his own physician if he so desires.

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Alexander Sanitarium, Belmont, Calif. LYtell 3-2143

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Surgical Technic, Surgical Anatomy and Clinical Surgery, Four Weeks, March 7, 1955

Surgical Anatomy and Clinical Surgery, Two Weeks, March 21, 1955

Surgery of Colon and Rectum, One Week, November 29

General Surgery, Two Weeks, December 6

Clinical Fractures, Two Weeks, by appointment

GYNECOLOGY—Vaginal Approach to Pelvic Surgery, One Week, November 1

Office and Operative Gynecology, Two Weeks, February 14, 1955

OBSTETRICS—General and Surgical Obstetrics, Two Weeks, November 1

MEDICINE—Gastroscopy and Gastroenterology, Two Weeks, November 1

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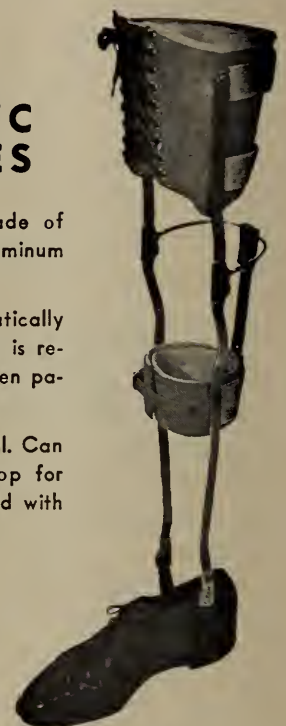
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classic medication
formulated for assured
freshness and stability

PRONAC*

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stabilized† powder for
patient-prepared
polysulfide lotion

Physicians are agreed that to be effective in acne, polysulfide lotion (lotio alba, N.F.) must be freshly prepared, but this is rarely practical because of instability of the classic ingredients. Now, available in the form of a completely stable powder for mixing by the patient just prior to use, PRONAC adds the advantages of guaranteed freshness to the "time-tested" values of white lotion for more effective treatment of acne.

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- ▶ unvarying potency
- ▶ assured stability
- ▶ minimal odor
- ▶ simply prepared

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Veratrite®

the drug of seasoned judgment
in management of hypertension

now contains...
cryptenamine

Veratrite® — practice-proved by more than 20 years of use in thousands of cases of mild and moderate hypertension—*now contains cryptenamine.*

Cryptenamine is a new alkaloid fraction of *Veratrum viride*—isolated by Irwin-Neisler—which produces sustained falls in blood pressure over prolonged periods and with unparalleled safety.

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Patients with labile hypertension show marked reductions in both systolic and diastolic blood pressure. These reductions can be maintained with continuous therapy. The earliest sign of successful Veratrite therapy is a distinct feeling of well-being, without excessive or unnatural euphoria.

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Warning: May be habit-forming.

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†Carotid Sinus Reflex

Bottles of 100, 500 and 1000.

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Coal Miners May Suffer From "Combat Fatigue"

Many coal miners with respiratory disorders also are suffering from emotional stress much like combat fatigue, a team of four psychiatrists and physicians reported recently.

Some could go back to work in the mines if treated psychologically and physically, the doctors wrote in a recent issue of the *Journal of the American Medical Association*. Unions and employers should help in their rehabilitation.

The Cincinnati physicians said they studied 40 men who apparently were incapacitated by shortness of breath, coughing, chest pain, and "smothering." More than half were suffering from emotional as well as physical disorders; and about a third from emotional difficulties alone. Although all were unable to work, many might return to mining if helped. Others could do non-mining work if they could be made to understand the reason for their troubles and realize that mining is not their only possible occupation.

The doctors said the development of emotional and respiratory disorders was easy to understand from the life history and circumstances of the men. Most of them had "worked hard in over-compensation for childhood deprivations." They had been over-solicitous for other miners and other members of their families, in trying to make up for childhood rivalries and for guilty feelings about surviving while other miners died.

After deaths, accidents, or narrow escapes, they unknowingly began to fear mining hazards while denying the fear even to themselves. When they developed respiratory ailments and were told by a physician that they had a physical disease, they unconsciously hid behind the disease symptoms to avoid further risk. However, this did not really help because without jobs they had no way to work off their aggressive feelings about mining and miners, which were the root of the whole problem.

The life story of most of the miners began with money difficulties and resulting poor education, hard work, fighting among brothers and sisters, and death in the family. The men started to work in their teens and helped raise younger brothers and sisters, or married and had children of their own to support. Later they felt bitter because they missed opportunities others had enjoyed, but they worked hard to give their children better lives than their own. They managed to hide their fears while living through explosions and falls that killed or maimed friends. Sometimes after a useless attempt to save a worker, or after removing a body and notifying the family, the men had nightmares and woke up choking, short of breath, and weak.

When first seen by physicians and psychiatrists, the miners studied were from 36 to 64 years old, had been having respiratory symptoms for three to ten

(Continued on Page 32)

Diesel Conversion Brings Skin Disease Problems

Use of a different anti-rust agent by railroads and other industries converting to diesel power might prevent a hard-to-treat skin disease, a Pittsburgh physician reports. Dr. William B. Guy, of the University of Pittsburgh School of Medicine, said the disease has been increasing since industries began converting to diesel power and cooling systems.

He said another type of skin disease, caused by solvents and fuel oil used to clean diesel parts, can be avoided by wearing protective clothing, using skin creams, and having good washing facilities. However, about the only solution for men who develop strong sensitivity to solvents or diesel fuel fumes is to find other jobs, Dr. Guy said in a recent issue of *Archives of Dermatology and Syphilology*, published by the American Medical Association.

The "most distressing" aspect is that such skin trouble often prevents men with long years of railroad service from continuing employment in railroad shops, he said. Giving them supervisors' or janitors' jobs not directly in contact with machinery won't always help, since even exposure to the fumes sometimes causes skin disease.

One of the main differences between steam and diesel engine work is that men who clean steam engine parts usually suffer skin disease only if accidentally splashed by hot, highly alkaline cleaning compounds. In spraying engines with diesel fuel oil, during the cleaning process, workers are exposed to the oily mist. Since "practically everything in a railroad shop and roundhouse becomes contaminated with diesel fuel," it is "practically impossible" to avoid contact with it.

"We have seen railroad shop workers, many of them highly skilled, with years of seniority working with steam engines, who, having developed a diesel oil dermatitis while in intimate contact with the material, could no longer work in railroad shops in any capacity," Dr. Guy said. "Attempts to use them in situations where their contacts would be minimized . . . would result in prompt recurrence of their dermatitis."

The skin problems have reached "the proportions of a dilemma" because of the use of chrome salts as an anti-rust agent in diesel cooling systems, he said. Chrome salt skin disease as an occupational hazard has been reported in woolen mills, aircraft plants, air conditioning equipment maintenance, chrome compound manufacturing, and in lithographic industries. Cases have developed months or years after the patient began such work. Many of them were from "casual and incidental contact" by persons not even connected with filling, emptying or otherwise working directly with cooling systems. Unlike other diesel skin diseases, it does not respond quickly to treatment and removal of the cause.

This kind of skin disease is especially hard to cure and seems to be prolonged by fixation of chrome crystals in the skin itself.

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of administration. For greatest therapeutic benefit, Betasyamine should be accompanied by routine manipulation therapy or ambulatory activity. (Cardiac patients should be cautioned not to exceed functional capacity. Betasyamine produces no appreciable results in healthy persons.)

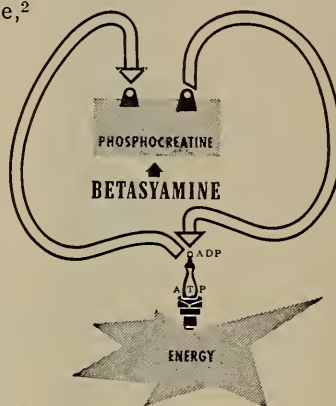
Betasyamine has no contraindication in recommended dosage: for children 6-12,

1 to 2 tablespoonfuls Emulsion (or 5 to 10 Tablets); for patients

over 12, up to 5 tablespoonfuls Emulsion (or up to 25

Tablets) daily, preferably in divided doses after meals, for at least three weeks to obtain demonstrable response.

Supplied: **Betasyamine Emulsion** (Bottles of 16 fluid ounces); **Betasyamine Tablets** (Bottles of 200).



(1) WEST, E. S. and TODD, W. R.:

Textbook of Biochemistry, The Macmillan Company, New York, 1952, pp. 1110, 1119.

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(Abstract) Bull. Biol. Sciences Foundation 1:4 (April) 1954. (6) DIXON, H. H. et al: West. J. Surg. Obstet. & Gynec. 62:338 (June) 1954.

(7) GRAYBIEL, A. and PATTERSON, C. A.: Ann. West. Med. & Surg. 5:863 (Oct.) 1951.

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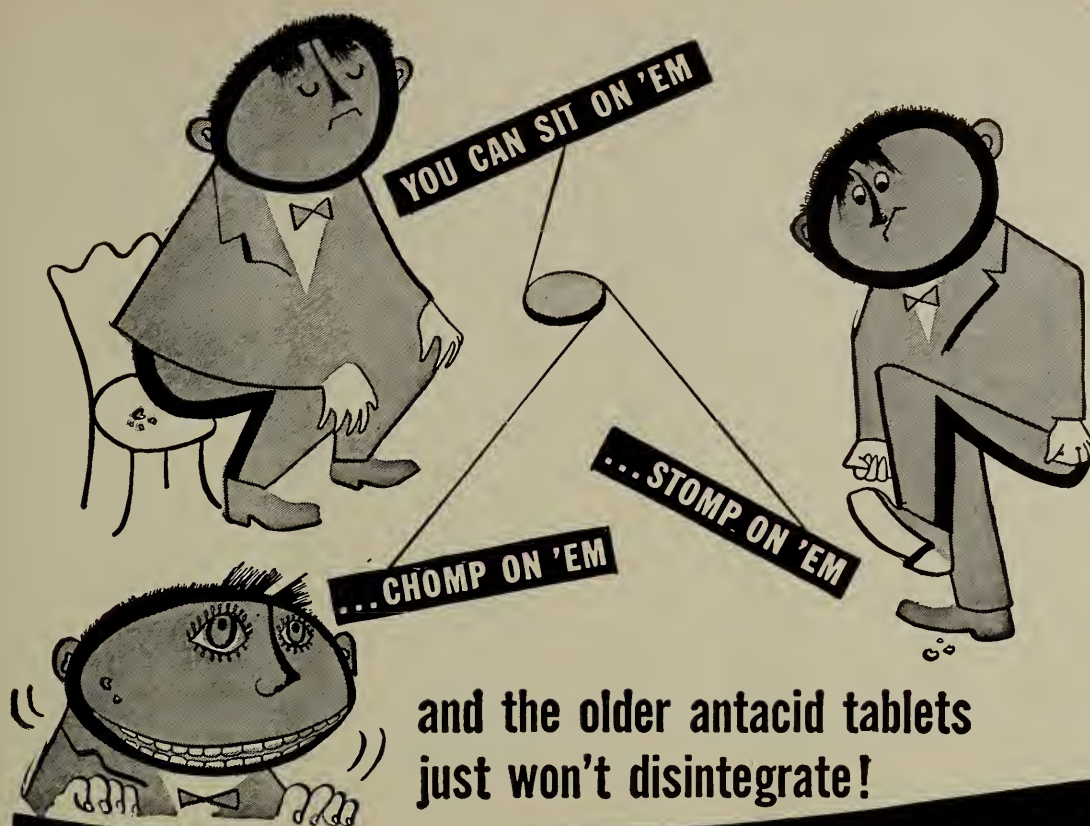
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Coal Miners May Suffer From "Combat Fatigue"

(Continued from Page 22)

years, and had not been working for one to two years. Many were helped by the United Mine Workers welfare fund, but were unhappy about being jobless. They might have done other jobs but didn't understand their problems and were convinced that mining was their only suitable work.

They were much like "a combat veteran in war who has 'had it' after prolonged battle stress and deaths of 'buddies,' but who could, nevertheless, be rehabilitated for noncombat duty or civilian life by psychiatric treatment and therapeutic occupation." Although being out of the mines relieved the men's anxiety about accidents, they felt insecure without jobs, and had lost their only outlet for aggressive feelings. As a result they became more depressed and more incapacitated.

The physicians made several recommendations for medical and social means to stop the pattern of "incapacity, unhappiness and nonproductivity." Physicians should recognize the importance of emotional factors and treat them before returning to mine work becomes "out of the question." Miners could be helped in the same way as battle casualties due to emotional fatigue.

However, "employers and unions have a responsi-

bility for opening up earlier opportunities for treatment and for rehabilitation at less hazardous occupations if improvement in medical care is to result in solution . . . of the problem," they said. "Finally, an educational program among miners concerning the psychological and physiological reactions to the stresses of their occupation would help to reduce the disabilities that are developing at present."

The report was made by Drs. W. Donald Ross, Lee H. Miller, H. Halbert Leet, and Frank Princi, of the University of Cincinnati College of Medicine and the Cincinnati General Hospital.

DR. A. A. MORRISON, president, California Medical Association—"When all persons interested in legislative or other phases of prepaid medical care start putting the patient's welfare first, rather than their own personal aggrandizement or the number of votes which might be influenced; when they realize all parties affected have problems and a right to equal consideration; when they realize that problems not only vary from state to state but from area to area within states; and when there is a real desire to sit around a conference table to discuss these problems on a realistic rather than theoretical basis, then and only then will there be progress made toward a reasonable and satisfactory solution."

—The A.M.A. Secretary's Letter

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The American Medical Association, in conjunction with United Air Lines, has arranged an attractive postconvention tour to Europe. Seven countries will be visited: France, England, Italy, Holland, Belgium, Germany, and Switzerland. Physicians and their wives can go to Europe following the annual A.M.A. convention in Atlantic City, June 6-10.

With the A.M.A. meeting being held in Atlantic City, physicians and their wives are offered an unusual opportunity to combine a trip to the East Coast with a visit to these interesting European countries. Similar trips have been sponsored by the California Medical Association, the World Medical Association, and other groups when their meetings have been held on the coast.

The European medical tour party will leave New York International Airport aboard special deluxe chartered airliners on Sunday, June 12. They will arrive in Paris late Monday morning, June 13.

All through the tour the party will stay at luxurious hotels in the many cities that will be visited. Motor coaches will provide interesting side tours to historic and scientific points.

Arrangements are being made for medical meetings in Paris, Rome, Lucerne, and London. Leading European scientists will lecture on topics of current interest to all physicians.

The return trip will be on Saturday, July 9,

arriving in New York on the afternoon of July 10. Complete information and reservation blanks can be obtained by writing A.M.A. Post-Convention Tour, c/o United Air Lines, 5959 South Cicero Avenue, Chicago 38, Ill.

—The A.M.A. Secretary's Letter

DR. E. VINCENT ASKEY, Vice-Speaker of A.M.A. House of Delegates—"People seem to resent the American Medical Association as being to blame, in some vague way, for sickness that has created a problem for them.

"As a matter of fact, people actually resent illness. Illness is not planned for. It disrupts the routine of life. It is unpleasant. It is dangerous and threatens to kill those we love. It is expensive.

"We must in some way get people to realize that really the American Medical Association is in their corner in this great fight for health."

—The A.M.A. Secretary's Letter

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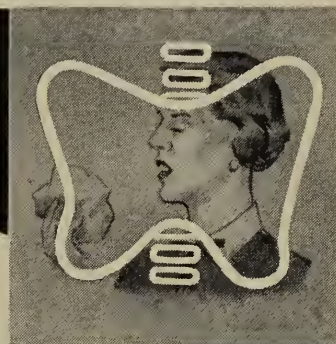
"...the conclusion is warranted that hypothyroidism ...does reduce resistance to colds. In these patients, administration of desiccated thyroid is as essential to freedom from colds as correction of any of the other multiple influences that make people susceptible to colds."

Cheney, M. C.: GP 10: 32 (July) 1954.

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TOPICAL OINTMENT (3%): ½ and 1 oz. tubes

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Patient L. H. (51) "had positive tremors of the eyelids, tongue, fingers, lips and voice . . . His complaints always centered about extreme nervousness, jitteriness, depression, and 'all-gone weakness'.

"'Dexamyl' allayed inward tension . . . gave him a sensation of amelioration and comfort. . . Yet, even in this intensely irritable patient, there were no side effects . . .

"He is now able to work and support himself, which he was unable to do for several years."

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'Dexamyl' Spansule (No. 1)—each containing the equivalent of *two* tablets: 'Dexedrine' Sulfate, 10 mg.; amobarbital, 1 gr. (65 mg.).

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correct chronic anemia

Unexplained weakness, easy fatigability, pallor, palpitation, and dyspnea on exertion ordinarily are the tell-tale signs of a chronic anemia in women during the third to fifth decades.¹

1. Rath, C. E.: M. Clin. North America 34: 1779, 1950.

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A half-million-dollar "watchdog" stands guard over every person who has an operation in any one of 3,000 hospitals—and it doesn't cost the patient a penny.

The watchdog includes hundreds of persons—total strangers to the patient—who know more about the operation than he does, according to an article by Robert R. Goldstein in a recent issue of *Today's Health* magazine, published by the American Medical Association.

They know every detail of the operation and the people who perform it, and can give a step-by-step accounting to representatives of five of "the most powerful medical organizations in the world," the article said. For the patient, this means that "every effort is being made to assure him of the best possible medical care."

This "round-the-clock" watcher of hospital patients is the little-publicized Joint Commission on Accreditation of Hospitals. It is backed by the A.M.A., the American Hospital Association, the American College of Surgeons, the American College of Physicians, and the Canadian Medical Association. They spend nearly half a million dollars a year keeping U. S. and Canadian hospitals operating at top efficiency.

Field representatives tour the country making routine inspections of the more than 3,000 hospitals on the commission's approved list, and of many others seeking its approval. Among the patient safeguards to be found in approved hospitals are fireproofing, adequate room for each patient and isolation space for contagious disease patients, proper diagnostic and treatment facilities under competent medical supervision, and emergency lighting in case of power failure and sterile conditions in operating rooms.

The approved hospital keeps records of anesthetic or drugs given, and any specimen taken from the body during operation is examined and recorded. Approval also depends on constant checks and periodic reviews by the hospital staffs of what is done in their institutions. Rates of mortality, unimproved cases, and cesarean births must be low.

Irregularities of any of these standards might mean loss of approval. Hardly any hospital can meet all the requirements; a score of 75 is needed for full approval, which this year was given to 3,418 of the 7,500 hospitals in the U. S. and Canada. Some other hospitals may meet the standards but have not yet sought commission approval under its voluntary plan of accreditation.

The commission hopes that ultimately every hospital in the two countries will be brought under the program. Its goal is for a standardized program of

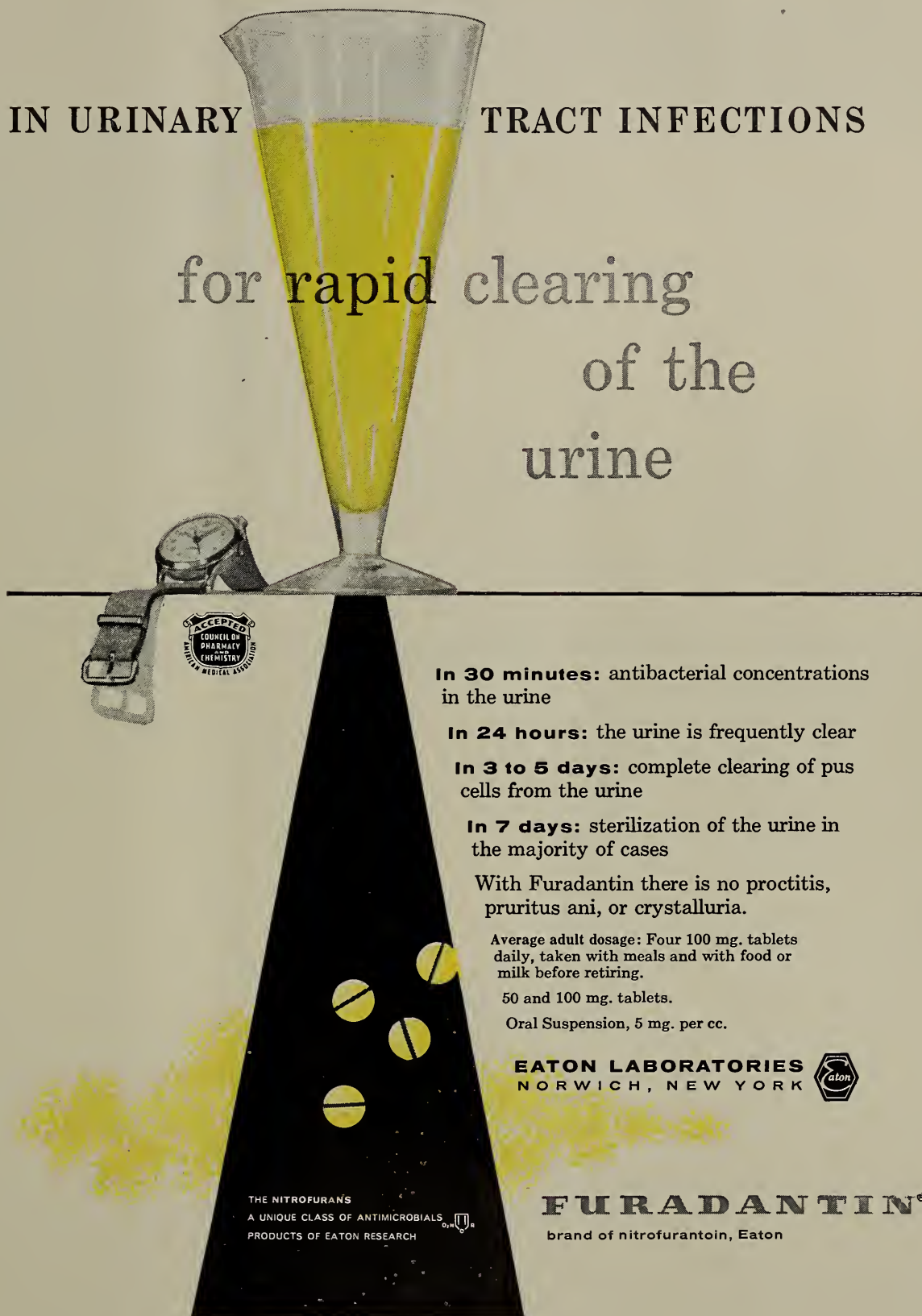
(Continued on Page 48)

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Factor in Sudden Death of Infants Suggested

A low level of the natural antibodies that fight infection and disease may possibly account for some sudden, unexpected deaths of infants, three New York scientists recently stated.

They said if the theory could be confirmed by future studies, the routine injection of small amounts of gamma globulin in young infants "might possibly prevent a substantial number of these sudden and unexpected deaths."

The theory was reported in a recent issue of the *Journal of the American Medical Association* by David M. Spain, M.D., Victoria A. Bradess, M.D., and Irving J. Greenblatt, Ph.D., Brooklyn.

It has been estimated that each year several thousand young infants in apparently good health die suddenly and unexpectedly, they said. The usual case is that of an infant one and a half to three and a half months old who is put to bed and found dead several hours later. The deaths are sometimes attributed to accidental mechanical suffocation, imbalance of certain gland chemicals, and various forms of infection, such as pneumonia. The Brooklyn scientists said only a diagnosis of infection appears to have any validity in most cases.

In studying 52 such deaths, the most significant

finding was occasional signs of infection, particularly in the respiratory system. The peak incidence was during winter and early spring. Deaths also reached a peak between two and three months of age, the "critical" period when the antibodies given to the baby by the mother before birth wear out and the baby begins building his own antibodies.

These findings suggested that the level of gamma globulin, a protein substance of the blood, might be a factor, since most antibodies are of the gamma globulin type of make-up. Gamma globulin produced from blood plasma has been used against such diseases as measles and epidemic hepatitis. The Brooklyn scientists said they tested gamma globulin levels in five babies who died suddenly, three of them without apparent cause. These three had unusually low GG levels. The other two were normal.

"It is therefore possible that an important factor in the inability of these infants to respond to an infection in the usual way by fighting it with antibodies may be dependent on a deficiency in antibodies as well as gamma globulin," they said. They noted that the number of cases studied was too small for any conclusions, but said if their theory could be confirmed by other studies, routine GG injections might prevent some of these deaths.

American Medical Association Mental Health Meeting Draws Good Attendance

A two-day mental health conference of state and county medical society representatives—the first of its kind ever held—drew an attendance of 75 key people. The meeting, held in A.M.A. headquarters in Chicago, was designed to bring about a closer working relationship between the psychiatrist and the general medical practitioner and other specialists.

Thirty-five state medical associations were represented at the meeting, most of them by chairmen of mental health committees. When the meeting ended, these representatives expressed a unanimous opinion that this type of session should be held each year.

Dr. Leo H. Bartemeier, Detroit, chairman of the A.M.A. Committee on Mental Health and chairman of the meeting, stated at the opening session that "we hope to gather information helpful to at least 20 states which do not have mental health committees."

A wide variety of problems was discussed. Mental health programs as carried on in three states—Virginia, Texas, and Connecticut—were outlined on the opening day. Other subjects covered included the advances made in mental health care, the part psy-

chiatric associations can play locally in cooperating with state and county societies, the neuropsychiatric program of the Veterans Administration, and how the Woman's Auxiliary to the A.M.A. can cooperate with local medical committees on mental health.

The second day's session included an address by Dr. Marvin A. Block, Buffalo, chairman of the A.M.A. Subcommittee on Alcoholism, on the functions of his committee at state and local levels.

The conference rejected a proposal to make alcoholism a reportable disease. To do so, some doctors contended, would discourage alcoholics from seeking help of doctors because they would not want their names listed as alcoholics in public records.

Recommendations, however, included these:

Establish committees on alcoholism in all medical societies, where feasible.

Include proper teaching on alcoholism in medical and other professional schools, and provide post-graduate education on alcoholism in these fields.

Urge cooperative and other medical and hospital insurance plans to accept and treat alcoholism as a disease, and urge hospital authorities to accept persons for treatment as alcoholics.

—The A.M.A. Secretary's Letter

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VON WITZLEBEN, H. J. MISSOURI M.A. 49:486, 1952.	28	26	92
BANKOFF, K., AND KOHRMAN, B. CLIN. MED. 60:264, 1953.	26	24	95

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"Watchdog" Guards Hospital Patients

(Continued from Page 38)

high quality for all hospitals. Dr. Gunnar Gundersen, La Crosse, Wis., first chairman of the commission, said recently the program represents "the best thinking and best inspiration" of the five great cooperating groups, and "if our duties are discharged well, the benefits to mankind through our profession, through our hospitals and for our civilization are unreckonable."

Army Taking 100 Physicians, First in 16 Months

Defense Department has asked Selective Service to call up 550 physicians under the doctor draft for assignments in December. One hundred are scheduled to go to the Army, the first since August 1953. Defense said the Air Force requires 200 and the Navy, 250 physicians. The Department also requested 150 dentists, all for the Air Force.

—A.M.A. Washington Letter

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Women May Travel While Pregnant

Traveling during pregnancy is not likely to be harmful if mixed with "a large dose of common sense."

An editorial in a recent issue of the *Journal of the American Medical Association* said a study of 500 pregnant women at Robins Air Force Base Hospital showed 413, or 82.6 per cent, traveled during pregnancy. The total distance was 817,961 miles, or an average of 1,980 miles a person. Most of it was in the second three months of pregnancy and was largely by automobile. Only a few of the women suffered ill effects.

Travel by present-day means is harmless if care is taken, the editorial said. For example, pregnant women about to begin an automobile trip should plan the itinerary well in advance in order to avoid unnecessary inconvenience. Nourishing meals, short walks, and plenty of rest on the trip are advisable. Medication against air or seasickness should be taken along on plane or boat trips. Long bus or train trips should be arranged to include stopovers. And the possibility of trouble in finding competent medical help during the trip always should be considered, the editorial said.

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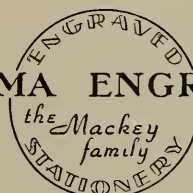
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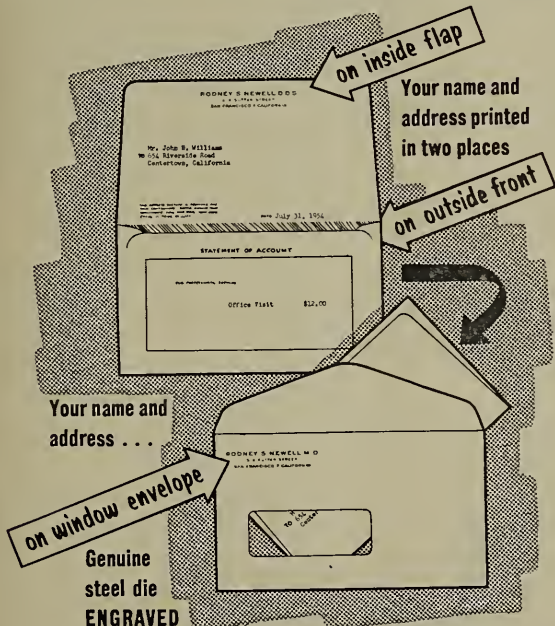
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Differential Diagnosis and Management of Cough

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COUGH IS A SYMPTOM which is so frequently associated with disease of the respiratory tract that physicians may sometimes overlook the fact that cough is actually a complex reflex mechanism, and that the reflex may be initiated by many other causes. While the old descriptions *stomach cough* or *uterine cough* may seem rather fanciful today, nevertheless the terms do emphasize the fact that clinicians who used them recognized that cough frequently originates outside the respiratory tract.

PHYSIOLOGY OF COUGH

The differential diagnosis of cough requires a practical knowledge of the physiology and purpose of the cough reflex. Cough has been described by Jackson as "the watchdog of the bronchial tree" (a description which would seem particularly appropriate in a barking cough). The purpose of cough is to supplement the normal mechanisms of ciliary action and bronchial peristalsis in removing irritants, foreign bodies, excess secretion or exudates from the bronchial tree. A cough that accomplishes these functions is useful and should be encouraged. On the other hand, a cough which is the result of purely reflex action and fails to bring up exudate or secretion is useless and should be checked. It is to be remembered, however, that since many patients, particularly women and children, swallow bronchial secretions as soon as they reach the pharynx, the

• Cough is a complex defensive reflex whose purpose is protection of the respiratory tract. There are many nonrespiratory causes, particularly pulmonary congestion from heart disease. Coughs may be useful, useless, or harmful. Treatment based on etiology and type of cough requires only a few medications whose efficiency has been demonstrated.

The meaning of cough as a symptom must be carefully determined before rational treatment can be planned. Recent researches on the physiology of the cough reflex, the bronchi, and the mechanisms of bronchial secretion have made it possible for a physician to plan a treatment program on a firm, scientific basis, rather than on tradition.

efficiency of a cough cannot be judged solely by the amount of expectoration.

Cough is a defensive reflex designed to keep the lower respiratory passages clear and to protect them from the entry of foreign material and stagnation of secretions. Ordinarily, these functions are accomplished by the normal physiologic defense mechanisms of the respiratory tract—ciliary action, bronchial peristalsis and the "milking" action of respiratory movements on the bronchi. Cilia are present throughout the trachea and bronchi as far as the terminal bronchioles and have a propulsive rate of about one inch per minute. This ciliary action plus normal secretion is sufficient to keep the air passages

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clean in health. Rhythmic contraction and dilatation of the bronchial smooth muscle serve to propel these secretions toward the trachea. In addition, respiratory movements cause the bronchi to become longer and wider in inspiration, shorter and narrower on expiration, thus producing a massaging effect on bronchial mucus. All these mechanisms combine to keep the lower respiratory tract free of accumulated secretion or foreign matter. Their effectiveness is shown by the fact that whereas the upper air passages are constantly covered with various bacteria, cultures from the lower tract are normally sterile.

In disease, these normal mechanisms stop or are greatly impaired. In the presence of acute inflammation of the bronchial mucosa ciliary action is destroyed, or rendered ineffective by excessive and tenacious secretions. When the lung is fixed by pulmonary fibrosis, atelectasis or consolidation, the bronchi are unable to dilate and constrict or to elongate and shorten, and secretions tend to accumulate. In these circumstances the watchdog is aroused and cough is induced.

HARMFUL COUGHING

Coughing, particularly when excessive, may of itself be harmful to the patient. The tremendous forces applied to the delicate pulmonary structures during the act of coughing are not sufficiently appreciated. The intrapulmonary pressure may rise above 150 mm. of mercury, or 3 pounds per square inch.⁴² The velocity of the column of ejected air ranges from 1 to 5 miles an hour in the respiratory bronchioles to more than 250 miles an hour at the glottis. As Banyai² remarked, the speed of a hurricane is about 111 miles an hour. The impact of these forces on the respiratory mucosa tends to damage and irritate them, producing a secondary cough which tends to perpetuate itself. This explains the remarkable instances in which a chronic cough of long duration is cured by a few doses of cough medicine.

Cough is injurious in many other ways. Pulmonary infections, notably pneumonia and tuberculosis, may be spread within the lung by coughing due to dissemination of infectious bronchial emboli. Similarly, the risk of contagion is greatly increased because of the greater dissemination of infected droplets of sputum.²⁹ Persistent cough interferes with rest, may initiate vomiting or pulmonary hemorrhage, or lead to myocardial failure due to the rise in intrapulmonary pressure which interferes with pulmonary circulation and contributes to right heart strain. Chronic cough, particularly when associated with varying degrees of bronchial obstruction, may lead to bronchiectasis and hypertrophic emphysema due to weakening and rupture of the elastic fibers of the lung. Severe or paroxysmal cough may produce spontaneous pneumothorax from rupture of an em-

physematous bleb or subpleural tubercle, or may cause multiple rib fractures. Cough may precipitate syncopal attacks resembling epilepsy,³¹ many instances of which are recorded in the literature.

The most common point of origin of the cough reflex is a stimulus to the branches of the superior laryngeal nerve in the laryngeal area.¹⁷ It also originates from vagal afferent fibers in the bronchial mucosa, especially at points of bifurcation. Other afferent nerves are located in the pharynx, pleura, external ear, through Arnold's branch to the canal, and from abdominal viscera, especially from the under-surface of the diaphragm through the phrenic nerve. While it is true that cough originates in the respiratory system in more than 90 per cent of cases, these other afferent pathways must not be forgotten. Sensitivity varies in different parts of the respiratory tree, being most marked in the larynx and at the tracheal bifurcation, and gradually diminishing peripherally, so that secretions in the lower tubes may not excite cough until a change in position brings them in contact with the more sensitive mucosa at the bifurcation of a bronchus.

The cough center is located in the medulla, and it coordinates the complex muscular movements involved in the act of coughing. It is closely related to the vomiting center, thus explaining why violent coughing may terminate in vomiting. Since the cough center is also under voluntary control, a painful cough, as in pneumonia, may be cut short by the patient. Similarly, cough may also be produced voluntarily and become a nervous habit.

The establishment of tolerance must also be borne in mind. Development of tolerance may lessen or obliterate the reflex sensitivity of the cough excitation areas. Illustrative of the development of tolerance is the phenomenon in laryngeal intubation, in which, after a time, the continued presence of the tube does not cause coughing, and in bronchoscopy, where the bronchoscope may be kept in contact without exciting cough unless new mucosal areas are stimulated. In disease the development of tolerance is of considerable importance in connection with foreign bodies, which may not excite cough after the initial paroxysms, and in bronchiectasis, where large amounts of retained secretions do not cause cough until a change in posture brings them in contact with new mucosal areas.

THE THREE PHASES OF COUGHING

The act of coughing has three distinct phases. In the first, or inspiratory phase, the chest becomes dilated through the action of the intercostal muscles, the rib elevators, the accessory respiratory muscles and descent of the diaphragm. The lung becomes loaded with air. In the second or compressive phase there is a short, sudden expiratory movement during

which the glottis is kept closed. Pressure in the lung may exceed 150 millimeters of mercury, and pressure in the great vessels is raised. In the final, or expulsive phase, the glottis is slightly opened while expiration is maintained, allowing the forceful expulsion of the previously compressed air.

In the first phase the intrapleural pressures become strongly negative, forcing the lung to expand if it is able, thus diminishing intrapleural negativity. If the bronchus is obstructed so that air cannot enter, or if the lung is atelectatic or fibrosed so that it cannot expand, the intrapleural pressure will be more negative on the affected side.

In the compressive phase the sudden contraction of the expiratory muscles, chiefly abdominal, decreases chest capacity. The glottis being closed, the lungs are greatly compressed and the intrapleural pressures become highly and equally positive. This phase has been described by Farber²³ as the "tussive squeeze" which tends to milk the bronchi of secretions.

In the expulsive phase intrapulmonary pressure rapidly drops until it equals the atmospheric pressure, when expulsion ceases. In the case of a diseased lung, with bronchial obstruction, atelectasis, retained secretions and infection, the peripheral bronchial walls are weakened and tend to dilate, while the proximal normally drained bronchi are narrower than the peripheral ones, due to the retention of elasticity and tonus and due also to reflex constriction from the local irritation of an inflammatory process in their neighborhood. The demarcation between the healthy and diseased portions of the bronchi thus appears as a relative stricture.

In the first phase, both the healthy and the diseased bronchi are filled with air as the bronchi dilate on inspiration. If filling is incomplete on the diseased side, the higher negative intrapleural pressure tends to exert a dilating force on the weakened bronchial walls. In the compressive phase the intrapleural pressures are equalized. In the expulsive phase, which is the most important, air rushes out of the healthy bronchi easily, but in diseased areas the relative narrowing impedes egress, so that when the pressure in healthy portions of the bronchi has fallen to atmospheric, in the diseased bronchi it is still high, which leads to gradual and progressive dilatation of the diseased portions. Thus cough itself is a factor in the production of bronchiectasis.

CLINICAL ASPECTS

In considering the clinical aspects of cough, it is well to stress that it is so common a complaint that it often attracts little attention, especially when it is nonproductive and not associated with hoarseness, fever or pain in the chest. Yet cough of that kind

may be the first warning of such diseases as bronchogenic carcinoma or tuberculosis. Since the habit of smoking cigarettes is so universal,^{25, 26, 37, 41} most persons will assume that a dry cough is a "cigarette cough" and pay little attention to it. This is a term which should always be suspect. (The vast majority of patients observed by the author in a period of five years at a large tuberculosis sanatorium had attributed cough to smoking until the onset of fever or hemoptysis led to the establishment of the correct diagnosis). True "cigarette cough" is dry, is frequently described as "morning cough" and is often associated with chronic granular pharyngitis. The danger of attributing such a cough to the irritation of smoking is well illustrated by the high degree of correlation demonstrated by Graham between prolonged and heavy use of cigarettes and the incidence of bronchogenic carcinoma. Patients whose histories would be most suggestive of cigarette cough are the very ones most likely to have bronchogenic carcinoma.

DIAGNOSTIC KEYS

Considerable help in the diagnosis of cough can be obtained by questioning the patient. The duration of cough is very important. A cough of recent origin would more likely represent upper respiratory tract infection, while cough that had persisted for some weeks would indicate the probability of more serious disease. A morning cough would suggest excessive smoking, or the nocturnal drainage of secretions from an infected sinus into the bronchi—the sinobronchial syndrome. The development of cough, particularly with expectoration on change of position, notably when lying down at night or arising in the morning, would suggest the accumulation of secretions in bronchiectatic cavities or lung abscess. An occupational history might reveal exposure to dusts or irritating fumes. Cough that occurs seasonally or only in particular environments would suggest allergic disease. Cough on exertion would lead to suspicion of myocardial insufficiency and congestive failure.¹⁹ The association of cough with whooping or vomiting would suggest whooping cough or lodgement of a foreign body. Association with wheezing would suggest asthma or foreign body.

All this information as to the duration of a cough and the circumstances associated with its onset are helpful clues to the correct diagnosis; but by far the most important questions in connection with a cough are: "Do you bring anything up?" and "What do you bring up?" The association of cough with expectoration makes accurate diagnosis easier, since the character and content of the sputum itself will often indicate the correct diagnosis. Therapeutic considerations, too, are considerably different as between productive and nonproductive cough.²²

A nonproductive cough is the result of reflex action produced by an irritant which the cough itself is unable to remove. Such a cough may arise from the following causes and sources:^{38, 43}

1. The external ear. Impacted cerumen or foreign body.
2. The nose. Nasal obstruction, with mouth breathing, causes cough that is worse at night. Chronic paranasal sinusitis^{15, 32} is one of the most frequent causes of chronic cough, both reflexly and especially when associated with postnasal drip and the sinobronchial syndrome.
3. The pharynx and larynx. Excessive smoking or drinking, overuse of the voice. Tuberculosis or carcinoma of the larynx. Laryngitis.
4. Mediastinal compression of the trachea, by aneurysm, tumor or enlarged hilar lymph nodes.
5. Bronchogenic carcinoma.
6. Early tuberculosis.
7. Pulmonary congestion from cardiac disease, especially mitral stenosis or left ventricular failure.
8. Worms. The embryos of ascaris and oxyuris pass through the lungs in the course of their developmental cycle and may cause a puzzling cough.
9. Nervousness. Cough may be produced voluntarily and become a nervous habit. Like sighing, it may be manifestation of anxiety rather than disease.

It is quite generally recognized that a dry cough is frequently an early manifestation of pulmonary tuberculosis, and that an x-ray film of the chest may reveal extensive parenchymal changes at a time when no abnormalities can be detected on physical examination. It is not so generally appreciated that a dry cough may be the earliest and, indeed, the only symptom of bronchogenic carcinoma at a time when no abnormality is visible in x-ray films. By the time diagnosis is finally made, all too often review of the clinical history will show a period of several months of symptoms, predominantly cough, during which time the patient was treated symptomatically for bronchitis or only advised to stop smoking. This low level of clinical suspicion is partially responsible for the lag between the onset of symptoms and correct diagnosis, for the inoperable stage that is reached in so many cases, and for the poor results of operation measured in terms of five-year arrest. A dry cough, particularly in a male, and especially in a heavy smoker, should call for immediate suspicion and the fullest study to make sure carcinoma is not present.

The importance of the cardiovascular system in the genesis of cough must be stressed.^{19, 21} Cough may be an early and predominant symptom of cardiovascular disease. Pulmonary congestion resulting from rheumatic heart disease with mitral stenosis or

from hypertensive, coronary or syphilitic heart disease with left ventricular failure, is the most common cause. Cough so caused may be initiated or aggravated by exertion, but often is nocturnal. Aneurysms, congenital vascular rings and pericardial effusion may cause cough. Pulmonary embolism, so frequent in cardiac disease, may cause cough, often associated with hemorrhagic sputum.

The condition of the tracheal and bronchial mucosa greatly influences the sound of a cough.¹⁷ Congestive catarrhal conditions of the pharynx produce a dry, hacking cough, frequently repeated. With laryngeal involvement a harsh, hoarse croupy cough is produced. When the vocal cords are destroyed, as in tuberculosis or neoplasm, the cough becomes toneless, whispering, aphonic. When a cord is paralyzed as in conditions which cause pressure paralysis of the left recurrent laryngeal nerve, especially thoracic aneurysm, the classic brassy cough results.

When cough is accompanied by expectoration, diagnosis is made much easier, for the character and content of the sputum are of great assistance. In acute pulmonary infections bacteriological examination will determine the infecting organism. Sensitivity tests on organisms recovered from culture of the sputum will indicate the antibiotic of choice, which may be life-saving. In tuberculosis the demonstration of acid-fast bacilli in the sputum not only is the best means of establishing the presence of active disease but helps determine the effectiveness of therapy. In connection with the disease it is particularly important to bear in mind that many patients swallow bronchial secretions as soon as they reach the pharynx and do not spit them out. In such cases bronchial secretions can be recovered by gastric lavage. The significance of growth of acid-fast bacilli on a culture of gastric material is exactly the same as that of a "positive" culture of sputum; it always indicates active disease.²⁴ Since pus is a factor common to all inflammation of mucous membranes, its mere presence is of little diagnostic value, although the quantity, color and odor of pus may be suggestive.

The daily volume of sputum may be readily determined. The expectoration of large amounts of foul-smelling sputum that settles in three layers is characteristic of advanced bronchiectasis. A decrease in the volume of sputum in a 24-hour period would indicate a favorable response to treatment. The tenacious, bloody sputum typical of acute lobar pneumonia and the gelatinous sputum containing eosinophils, Curschman spirals and Charcot-Leyden crystals typical of asthma are easily recognized.

TREATMENT OF COUGH

The treatment of cough is primarily a problem of determining and treating the cause. In many cases, however, treatment must be directed toward reliev-

ing the symptom itself, either because the cough is ineffective and useless or actually harmful, or because the cause cannot be eliminated. Here the basic principle must be to reduce the force and frequency of the cough to a minimum compatible with the adequate evacuation of the respiratory tract.² Cough remedies have been described³⁴ as inheritances of folklore. Certainly the prescription of a cough syrup^{6,9} frequently represents the last vestige of polypharmacy in therapeutics. It must be obvious from the complex nature and etiologic vagaries of cough that there can be no such thing as a good all-purpose cough remedy. From the previous discussion of the physiology of the cough reflex it will be evident that there are four distinct points of attack in treating cough: The cough center, the peripheral reflex sensitivity, the bronchi and the bronchial secretions.

Routine prescription of a cough sedative, usually a narcotic, to check a cough, is to be deprecated.^{13,29,40} Only a useless, nonproductive cough should be so treated, since depressing the cough reflex may be very harmful if the cough is successfully draining the bronchial tree of infected secretions. Codeine is most commonly prescribed and, in the doses generally used (8 mg. to a teaspoonful of vehicle) seldom causes undesirable side effects, constipation and drowsiness.¹⁸ In especially sensitive patients dihydrocodeinone bitartrate³⁰ or caramiphen ethane-disulfonate³⁹ may be substituted. The efficacy of codeine as a cough sedative is not universally accepted. In one study²⁰ a dosage of 10 mg. was found as effective as the 30 mg. formerly used. Another investigator²⁸ found no evidence that codeine by mouth even in doses of 0.2 gm. has anything more than a psychological effect. There is general agreement that while heroin is the most effective antitussive agent,²⁸ the danger of addiction is too great for clinical use. Many investigators feel the same objection applies to the use of morphine or dihydromorphine (Dilaudid) while others¹⁸ point out that the dosage of morphine required is so small (about 2 mg.) that undesirable side effects are not produced and the danger of addiction is nil. In dealing with cough caused by malignant tumor or by mediastinal compression from aneurysm, the more powerful sedatives, Dilaudid or morphine, may be required in increasing doses.

Measures to control peripheral reflex hyperirritability include the soothing demulcent action of syrups and cough-drops on the irritated mucosa of the pharynx, the use of lozenges containing ethylaminobenzoate, and the use of phenobarbital. Recently the addition of antihistamines to cough mixtures on the basis of their sedative action has been suggested, but this seems hardly justifiable except in cases in which an allergic factor is demonstrable.¹²

The usefulness of bronchial dilators in asthma is well known, particularly aminophylline and ephedrine or various synthetic variations of ephedrine. In many cases of bronchitis, particularly viral bronchitis of the wheezy type so commonly seen in the San Francisco Bay area, the administration of aminophylline and ephedrine, usually combined with phenobarbital, brings about bronchial dilatation, relieves wheezing and dyspnea, improves bronchial drainage and controls cough.

ALTERING BRONCHIAL SECRETIONS

There are many substances that are supposed to act by altering the amount or character of the bronchial secretions. Recent experimental work, however, has cast considerable doubt on the effectiveness of many of these preparations, particularly in the doses usually employed clinically.^{1, 29, 44} An attempt to change bronchial secretions is indicated if the cough is tight and the volume of secretions deficient or if the cough is loose and secretions excessive.

In a tight cough with scanty sputum, the most useful medication is water.²² The patient should be encouraged to take fluids and fruit juices freely; each dose of cough medicine should be prescribed with a full glass of water; the air of the sick-room should be kept saturated with water vapor; and steam inhalations should be prescribed, either plain or with the addition of a suitable aromatic substance such as tincture of benzoin, menthol, turpentine or oil of pine. It is probable that the benefit is derived chiefly from the steam itself, and that the aroma makes the procedure more pleasant and has psychological benefit. There is some evidence that the inhalation of aromatic fumes may reflexly increase bronchial secretions. The use of expectorants is often disappointing and uncertain, and yet, to quote Forcheimer, "We should be very sorry to be without them." The object is to further the productivity of the cough by increasing the secretions of the bronchial tree. Any increase in the fluid in the respiratory tract would facilitate discharge of mucus or exudate by making it less sticky, would increase the continuous upward streaming of secretions, and by forming and maintaining a protective film over the membranes would tend to decrease activation of the afferent nerve endings and initiation of the cough reflex.

Expectorant action may be exerted in three ways: (1) A gastric reflex mediated through the vagus to the medulla and thence to the secretory cells of the bronchial mucosa; (2) direct stimulation of a secretory center in the medulla, and (3) direct action on the secreting cells. While it seems probable that all three modes of action may be involved to varying degrees with various expectorants, the studies of Boyd^{5, 7, 8, 10, 11} showed that the stimulation of a gastric reflex is particularly important. Boyd³³ devised

a method of directly measuring the quantity of bronchial secretion in experimental animals by means of a T-tube in the trachea. He introduced various drugs into the stomach and measured the effect on the quantity of respiratory tract fluid. He demonstrated that the commonly used expectorants do augment the output of respiratory tract fluid to a maximum between 100 and 200 per cent. Among the preparations studied were ammonium chloride, which increased fluid output by 88 per cent; potassium iodide, 150 per cent; terpin hydrate, 96 per cent; guaiacol, 78 per cent. Glycerol guaiacolate, an ether of guaiacol, which recently became commercially available, increased the output 185 per cent. Further study of this preparation would seem to be warranted.^{14, 16} Stimulation of the cervical sympathetic nerve had little effect, while stimulation of the cervical vagus stump increased the output by 200 to 300 per cent. Further studies with cholinergic drugs showed that all of them would increase bronchial secretion, some more than tenfold. While the side effects of these drugs in the forms available today might be undesirable in a cough medicine, synthetic modifications having pronounced expectorant properties with few undesirable actions may be developed. When the gastric nerves were sectioned, effectiveness of expectorant drugs was much reduced, a fact that is indicative of the importance of the gastric reflex. This would also explain the ineffectiveness of enteric-coated ammonium chloride for this purpose, as was pointed out by Beckman. As iodides are irritant, they are contraindicated in acute inflammation. They are used when secretion is tenacious and difficult to dislodge, and are most effective in bronchiectasis and in asthma and asthmatic bronchitis.²⁷ They are readily prescribed as the saturated solution of potassium iodide, 15 to 25 drops three times a day in water.

When a cough is excessively loose, terpin hydrate is the agent of choice. The usual elixir of terpin hydrate contains so little, slightly over 60 mg. per teaspoonful, that it serves only as a vehicle. When the stimulant expectorant effect is desired it is best prescribed in 0.3 gm. capsules four times daily. In the chronic productive cough of bronchiectasis and chronic bronchitis, postural drainage or aspiration of excess secretions through a bronchoscope, followed by instillation of iodized oil, often serves to reduce the excessive cough and expectoration.

STIMULUS FOR WEAK COUGH

In some circumstances a cough may be too feeble to accomplish its object and increased coughing may be needed to clear the chest of secretions. This may be accomplished by encouraging the patient to cough voluntarily, by frequent change of posture, and by pharyngeal irritation to stimulate the cough

reflex. Voluntary deep breathing is also helpful, and if voluntary measures are unsuccessful the inhalation of concentrations of 5 to 10 per cent carbon dioxide in oxygen serves as a powerful respiratory stimulus to bring about respirations sufficiently deep to get beyond the accumulating secretions.^{2, 3} It is obvious that all liquefying expectorants and cough sedatives are contraindicated. Continuous pharyngeal and laryngeal suction is very effective in removing the excess secretion, and may prove life-saving. Since the experiments of Boyd also showed that the increased amount of respiratory tract fluid produced by cholinergic agents was eliminated by atropine, the use of the drug would be indicated whenever bronchial secretion is excessive, although clinically its use is often disappointing, perhaps because bronchial secretion is partially the result of direct stimulation of the bronchial glands and is not mediated through vagal pathways.

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Iron Therapy in Pregnancy

A Comparative Study of Various Modes

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INTEREST IN THE STUDY of anemia in pregnancy probably began more than a century ago with the publication of *Notes on Anæmia* by Walter Channing.² He reported the first case which ended fatally and noted in the anamnesis that the patient had been eating a diet adequate in meats, juices and decoctions of meat as well as alcoholic and vinous stimulants. Inasmuch as food was well digested and the appetite remained good, iron therapy, although considered, was believed unnecessary, he reported. Symptoms of the various organ systems of the body were well outlined in the report, especially those concerning the circulatory and respiratory systems. It was noted that the blood was changed, being pale, and "that material which colored the blood, especially the red globules, was changed or more or less wanting. It is more liquide, coagulates but slightly or not at all, hence the composition, its chemical elements or their relations, have undergone changes of some sort. The blood was thin and watery, pale, with soft or no coagula. It resembles somewhat the blood which escapes at length from a wound which cannot be closed, as from pulling a tooth, cutting the gums, etc., in hemorrhagic persons. Yet the blood in anæmia has its differences from this. In its cause it especially has these, for it is not a state induced by hemorrhage." Increased blood volume in pregnancy was hinted by Channing, for some of his patients were treated by blood letting and the "blood burst from the orifice with violence" and the small veins became large and of "bright arterial color." Transfusion was considered "if safe in itself" but "what possible benefit would such a supply of blood be?"

The seemingly neglected importance of adequate gastric secretion in pregnancy was reported in 1932 by Strauss and Castle^{12, 13} in two publications. Groups of patients were subjected to monthly gastric analysis and it was found that there was decreased secretory power of the gastric mucosa in pregnancy and the cause of the decrease was unknown. Eighty per cent of the patients studied had higher concentrations of hydrochloric acid in the

• Study was made of groups of pregnant patients who were given various hematinic agents from the seventh month of gestation to term.

Dilute hydrochloric acid given with meals in usual doses produced no appreciable increase in the hemoglobin concentration, erythrocyte count or packed cell volume. Iron therapy in the form of orally administered ferrous sulfate, or orally administered ferrous sulfate-molybdenum oxide, or as intravenously administered saccharated iron oxide had a beneficial effect on these three factors in the blood.

gastric juice after delivery than during pregnancy, and the amount was about three times as great as during the sixth month of gestation. A relationship of hemoglobin levels to the adequacy of diet and to the content of hydrochloric acid in the third trimester was noted. Although the hemoglobin levels were generally low, patients with adequate diet and 15 cc. or more of one-tenth normal hydrochloric acid had the highest levels, and patients with achlorhydria and inadequate diet had the lowest. The anemia resembled that of gastrointestinal disturbances, poor diet and loss of blood.

Hamilton, Higgins and Alsop⁸ found the use of hydrochloric acid to be of value in treating patients who did not respond to the administration of iron by mouth. Seventy-four per cent of the patients in a series reported upon by them responded well when given iron orally; and when those who did not benefit were given hydrochloric acid as well, the total number with favorable response was increased by another 10 per cent.

The most widely recommended iron preparation for use in hypochromic anemia is ferrous sulfate U.S.P. The dosage needed is smaller than that of reduced iron or ferric salts, and the average dose is 1 gm. daily in divided portions. Occasionally it is ineffective and now and again disagreeable and variable gastrointestinal side-effects develop.⁷

In recent years there has been an almost precipitous rise in the use of iron compounded with other metals for hematinic purposes. Ferrous sulfate processed with molybdenum oxide in tablet form has been favorably reported upon in the literature. Talso and Dieckmann¹⁴ in 1948 reported that various iron

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salts did not produce significant elevation in hemoglobin concentrations. However, in 1949, Dieckmann and Priddle,⁴ noting the favorable results of Healy and Neary in the use of iron-molybdenum complex employed it in their clinic. Subsequently they reported their impressions concerning the use of this material in pregnancy⁵ and found that the rise in hemoglobin was so dramatic that at first it was thought the patients might have a decrease in plasma volume, although this impression was discarded upon further deliberation.

In recent years iron preparations that are effective when given intravenously have become available. Nicholson and Assali¹⁰ observed a favorable response to the use of saccharated iron oxide in anemic pregnant patients, and noted the response was greatest in the cases in which anemia was greatest. Kartchner and Holmstrom⁹ used iron intravenously with positive results in patients who could not otherwise receive iron or who registered for care so late in pregnancy that therapy with iron by mouth would not be effective. Hamilton, Higgins and Alsop⁸ used iron oxide intravenously in a large series of patients and observed favorable response. They also noted several side effects and in some instances felt justified in terminating the therapy.

According to Eastman⁶ the increase in the total volume of blood in gestation approximates 30 per cent, the increase in plasma volume is about 40 per cent, and the increase in red cell volume is about 20 per cent. It can be surmised from this that there is a concurrent decrease in the hematocrit reading. The increase in plasma volume has been attributed to hydremia. Frequently in pregnancy anemia is simulated, with relative reduction of packed cell volume, of erythrocyte content and of hemoglobin content. This condition has been called "pseudoanemia," for actually the volume of erythrocytes is increased by 20 per cent. The diagnosis of anemia in pregnancy, according to Eastman, should be made only if the erythrocyte content falls below 3.25 million per cu. mm., the hemoglobin level below 10 gm. per 100 cc., and the packed cell volume below 30 per cent of the whole blood. According to Talso and Dieckmann¹⁴ there is a 25 per cent increase in plasma volume during pregnancy, but the erythrocyte count increases only 23 per cent, the disparity bringing about "physiologic anemia."

The reported "standard values" for hematologic factors in peripheral blood vary somewhat, depending on the authority, but in general there is fairly close agreement as to standards. Talso and Dieckmann used as standard values a hemoglobin level of 10 gm. per 100 cc. of blood, a packed cell volume of 33 per cent of the whole blood and an erythrocyte content of 3,360,000 per cu. mm. of blood. They also noted that errors in hemoglobin determinations were 7 to 15 per cent, that errors in

erythrocyte count were about 8 per cent, and that the error in packed cell volume determinations was only 2 per cent. Wolff and Limarzi¹⁵ established values of 10 gm. of hemoglobin per 100 cc. of blood, erythrocyte content of 3,500,000 per cu. mm. and packed cell volume of 30 per cent.

Benstead and Theobald¹ observed that normal values were maintained if patients were given therapeutic doses of iron during pregnancy, and also that ferrous sulfate or ferrous sulfate-molybdenum oxide complex given during the last trimester produced a recovery from anemia and a maintenance of values to term.

The therapy of choice varies. Some investigators have reported that ferrous sulfate is as adequate as any form¹ while others have expressed belief that ferrous sulfate-molybdenum oxide complex is necessary.^{3, 5} Hamilton, Higgins and Alsop⁸ reported that the addition of hydrochloric acid to the intake of ferrous sulfate-molybdenum oxide complex brought about favorable response in the levels of blood components. Lund advocated the addition of vitamin C as a hematinic because it aids in the absorption of iron. Recently many investigators^{8, 9, 10} have reported that administration of saccharated oxide of iron has produced remarkable improvements in the condition of peripheral blood of anemic pregnant patients.

The current prevalent practice is to administer iron alone or in some combined form during pregnancy. Some obstetricians give it throughout pregnancy without doing laboratory studies on the peripheral blood, while others carefully and frequently determine the condition of the blood and use iron only if indicated. Probably the majority of physicians use iron preparations for all or part of the pregnancy and examine the blood periodically only if there is clinical indication of anemia. One of the authors (R.W.D.) long maintained that the routine administration of iron by mouth during pregnancy was of little or no value because of the various factors involved in "pseudoanemia" as previously mentioned, and did not employ any form of iron intake with the exception of that ingested in the diet. This opinion was not isolated, as other practitioners felt also at one time that supplementation of the diet by iron salts was of slight or no value.⁴

Accordingly a study was begun to test the opinion that the routine use of iron therapy in pregnancy either with or without careful laboratory observations of the blood was of little or no value, to review the great number of basic factors in the increase of values in the peripheral blood in pregnancy as outlined in preceding paragraphs, and to evaluate current widely accepted practices concerning hematinic therapy. Obstetrical patients treated in private practice were divided into five groups in a non-selected manner. All patients were instructed as

TABLE 1.—Mean erythrocyte count
(in millions per cu. mm. of blood)

Therapy used	No. of pa- tients	7 months	Term	Change	
None	26	3.859	4.029	+ .170	Combined variance of changes $S^2 = .2358$ $S = .4856$
Hydrochloric acid	30	3.869	4.008	+ .139	
Ferrous sulfate....	27	3.794	4.345	+ .551	
Fesmocox*	24	3.733	4.210	+ .477	
Saccharated iron oxide.....	20	3.640	4.103	+ .463	

* Ferrous sulfate and molybdenum oxide complex.

to diet adequate in calories, vitamins, protein, carbohydrate and fat. In addition they were told to drink one quart of skimmed milk and to take one multiple vitamin capsule daily. Adherence to diet and other prescription was under meticulous and personal control. Each patient, when the gestation period reached seven months, was assigned to either a control or treatment group. Laboratory determination of the hemoglobin concentration, packed cell volume and erythrocyte content of the peripheral blood was carried out.

The first group of patients (Group I) consisted of 26 who received no supplemental hematinic therapy of any sort. Group II was made up of 30 patients who received 0.6 cc. of dilute hydrochloric acid three times daily with meals. Patients in these two groups received no iron therapy as such. Group III consisted of 27 patients who received three times daily, with meals, 1 gm. in divided portions of enteric coated (and, incidentally, iron protective coated) ferrous sulfate U.S.P. In Group IV were 24 patients who received two enteric and iron protective coated tablets containing each 0.195 gm. of ferrous sulfate and 0.003 gm. of molybdenum oxide three times daily with meals. Group V consisted of 20 patients who received saccharated iron oxide intravenously during the last two months of pregnancy. The dosage given was calculated on the basis of the hemoglobin deficiency. One hundred milligrams of elemental iron (or one 5.0 cc. ampoule) was injected intravenously for each 0.6 gram deficit of hemoglobin per 100 cc. of blood, and the dosage did not take into account the increase in blood volume. The various treatments described were begun on all patients at seven months of gestation regardless of the presence or absence of anemia, with the prime objective of determining whether there would be any differences in the various findings in the peripheral blood associated with the routine use of the various agents of therapy. When the patients reached term, as determined by the onset of labor, the various laboratory studies were repeated.

The data obtained in all groups were subjected to analysis. Table 1 contains the figures for the mean erythrocyte count in millions per cu. mm. of blood at the seven-month period and again at term. Table

TABLE 2.—Mean hemoglobin (in gms. per 100 cc. of blood)

Therapy used	No. of pa- tients	7 months	Term	Change	
None	26	10.15	11.51	+1.36	Combined variance of changes $S^2 = 1.611$ $S = 1.27$
Hydrochloric acid	30	10.57	11.64	+1.07	
Ferrous sulfate....	27	10.61	13.09	+2.48	
Fesmocox*	24	10.68	12.94	+2.26	
Saccharated iron oxide.....	20	9.97	12.38	+2.41	

* Ferrous sulfate and molybdenum oxide complex.

TABLE 3.—Mean packed cell volume (per cent)

Therapy used	No. of pa- tients	7 months	Term	Change	
None	26	34.0	37.3	+3.3	Combined variance of changes $S^2 = 12.113$ $S = 3.48$
Hydrochloric acid	30	34.5	37.1	+2.6	
Ferrous sulfate....	27	34.9	40.2	+5.3	
Fesmocox*	24	35.0	40.5	+5.5	
Saccharated iron oxide.....	20	32.5	38.4	+5.9	

* Ferrous sulfate and molybdenum oxide complex.

TABLE 4.—Mean color index†

Therapy used	No. of pa- tients	7 months	Term	Change	
None	26	.909	.965	+ .056	Combined variance of changes $S^2 = .016632$ $S = .1290$
Hydrochloric acid	30	.946	.993	+ .047	
Ferrous sulfate....	27	.963	1.020	+ .057	
Fesmocox‡	24	.971	1.042	+ .071	
Saccharated iron oxide.....	20	.941	1.025	+ .084	

Hemoglobin grams per 100 cc. $\times 6.9$

†Color index = $\frac{\text{Erythrocytes millions per cu. mm.} \times 20 \text{ (Wintrobe)}}{\text{Hemoglobin grams per 100 cc.} \times 6.9}$

‡Ferrous sulfate and molybdenum oxide complex.

2 gives similar data as to mean hemoglobin levels. Table 3 similarly contains the mean figures for the packed cell volume, and the mean values of the color index are given in Table 4. The standard deviation was then calculated according to the formula

$$S^2 = \frac{\sum d^2 - \frac{(\sum d)^2}{N}}{N - 1}$$

wherein

S^2 = (standard deviation)²

N = number of patients in group

$\sum d$ = sum of the differences of each observation from seven months to term

$\sum d^2$ = sum of the same differences squared

RESULTS

There was an increase in all the mean values from the time the patients were observed initially until the time labor commenced. The erythrocyte count (Table 1) increased in all groups including the control group and the group made up of patients who received hydrochloric acid. However, patients in the three groups in which specific iron therapy of one kind or another was given had a much greater increase in erythrocyte count. The mean hemoglobin level increased in all groups also, and similarly there was a much greater rise in patients who received

some form of iron as compared with those who were in either the control group or the group in which hydrochloric acid only was given. The mean packed cell volume likewise rose higher in the patients who received some form of iron therapy as compared with those in control groups or in groups receiving hydrochloric acid only. In none of the five groups, however, was there any significant change in the values of the color index; indeed, the color indices varied little from group to group.

By the method of Scheffé it was determined statistically that the differences in gains in all four variables (erythrocyte count, hemoglobin content, packed cell volume and color index) as between the three groups of patients treated with some form of iron were not sufficiently large (compared to the natural variation in gain from patient to patient) to be significant at the 5 per cent level. There was therefore no basis for concluding that any of the three iron preparations used is better, or worse, than any of the others. Likewise the difference in gains on the same four variables between the two groups not receiving iron were too small to justify conclusion that there was any true difference between the group receiving hydrochloric acid and the group receiving no therapy (control group) with respect to these hematological variables.

On the other hand, as to three of the variables—erythrocyte count, hemoglobin content and cell volume—the gains of patients receiving some one of the three forms of iron therapy were significantly larger, at the 5 per cent level, than the gains of patients in the two groups not receiving iron.

DISCUSSION

The beginning premise that supplemental iron therapy in the last part of pregnancy is of little or no value was found to be not true. Patients who received iron therapy as compared with the two groups of patients receiving no iron—the control group and the group receiving hydrochloric acid—had relatively greater response as regards erythrocyte count, hemoglobin level and packed cell volume. There was no significant difference as to color index between the control groups (hydrochloric acid and control groups) and the groups in which treatment with iron was given. This is to be expected when one considers the factors involved in the color index—namely, hemoglobin and numbers of erythrocytes plus the utilization of a constant factor. When the color

index = $\frac{\text{hemoglobin grams per 100 cc.} \times 6.9}{\text{erythrocytes millions per cu. mm.} \times 20}$, it is obvious that when groups of patients are given treatment which increases both hemoglobin and the number of erythrocytes, there may not be a great change in the color index.

Side effects of the various preparations that were used were of more than passing interest. In only one case was it necessary to stop treatment because of gastrointestinal intolerance to ferrous sulfate, and in no case because of intolerance to ferrous sulfate-molybdenum oxide complex. There were few unfavorable reactions to intravenous use of saccharated iron oxide. One patient had syncope once but it did not recur on subsequent injections. Two patients noted giddiness or lightheadedness on one occasion. There were a number of patients in whom sore antecubital fossae, containing hematomas developed, but none requested discontinuance of therapy. An interesting side effect of the use of hydrochloric acid was that in many cases patients who had heartburn without the medication were relieved of this common disorder of pregnancy after they began taking it. Perhaps heartburn is due to achlorhydria, a condition present in many pregnant women, as was noted by Strauss and Castle. This observation will be subjected to further study.

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Needle Biopsy in Diagnosis of Prostatic Cancer

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CANCER OF THE PROSTATE causes more than 10,000 deaths in the United States every year.² On the basis of these figures it can be estimated that in California alone more than 700 men die of the disease yearly. It accounts for 90 per cent of all male genital cancers and for 63 per cent of all male genitourinary cancers. Only carcinoma of the stomach and bowel cause more cancer deaths among the male population.²

Despite the progress that has been made in the use of endocrine substance in control of advanced cancer of the prostate, the only method of curing this disease is complete prostatectomy at a time when the tumor is still localized in the prostate.

It is generally agreed that only 5 to 10 per cent of prostatic cancers are diagnosed early enough to permit operation with a reasonable chance of cure.^{3,6} This figure has not changed appreciably in the last 30 years, which indicates that progress in the early diagnosis of the disease has lagged. Yet in 90 per cent of cases of overt cancer of the prostate the tumor can be felt on digital rectal examination. Since it is a disease that produces no symptoms in its early stages, patients do not seek medical attention. Therefore, routine and frequent digital rectal examinations are of signal importance. These must be done critically; and because of its prevalence the possibility of prostatic cancer should always be considered in men over 40 years of age. Unusual induration, nodularity, or fixation of the prostate cannot be ignored. On the contrary, if progress in the diagnosis of this disease is to be made, these findings must be considered indicative of cancer until proved otherwise.

Whether the lesion felt is small or large and whether the prostate is mobile or fixed, a confirmed diagnosis is necessary before instituting appropriate definitive or palliative treatment. What methods are available for confirming the diagnosis of clinically suspected cancer of the prostate? Acid phosphatase determination, bone x-ray examination and marrow aspiration are often valuable in establishing the diagnosis of advanced incurable prostatic cancer. But

• *Four methods available for the diagnosis of carcinoma of the prostate—digital rectal evaluation, prostatic smear, needle biopsy and open perineal or transurethral biopsy—were studied and correlated.*

One hundred ten patients with clinical indications of cancer of the prostate were subjected to needle biopsy and open perineal or transurethral biopsy. Seventy of the same patients had prostatic smear examination.

Using the open perineal biopsy or the positive transurethral biopsy as the standard, the accuracy of prostatic palpation, prostatic smear and needle biopsy were obtained.

A high degree of correlation (74 per cent) was demonstrated between digital rectal evaluation and positive surgical biopsies in both early and late cases. There were 17 false positive clinical diagnoses.

The prostatic smear showed an overall correlation of 45 per cent when compared with the results of positive surgical biopsy.

The overall accuracy of needle biopsy was 73 per cent. However, in the last 39 cases, including eight in which the carcinomas were of groups A and B (curable), the needle accuracy was 100 per cent.

When there is clinical indication of malignant disease of the prostate, needle biopsy of the lesion is warranted and should be done before definitive or palliative treatment is undertaken.

when results of these examinations are negative they have not excluded carcinoma of the prostate. The administration of estrogens as a "therapeutic test" is not reliable and may often so confuse the picture that a proper diagnosis is not made.¹¹

Histological confirmation of the disease can be made in several ways. Of these ways, only open perineal biopsy has been considered reliable in the past. Transurethral biopsy is valuable only if positive, since cancer still confined to the posterior portion of the gland may easily escape the resectoscope.

Prostatic smear using the Papanicolaou technique, although enthusiastically received, has been disappointing to most investigators as a method of detect-

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Dr. Rosenthal was responsible for interpreting the prostatic smears in this study. The routine pathologic studies were done by the department of pathology, Veterans Administration Center.

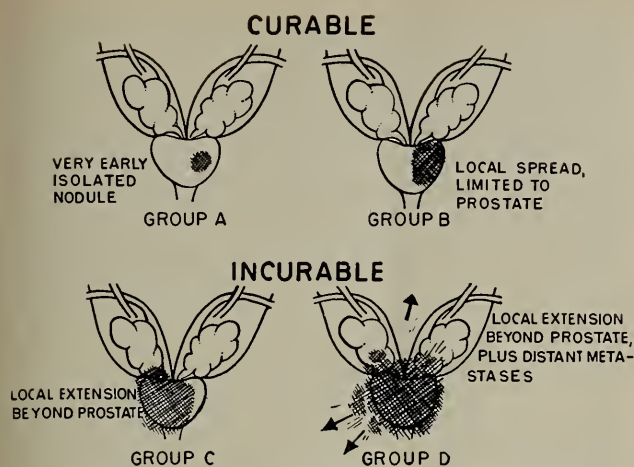


Chart 1.—Classification of cancer of the prostate.

ing or confirming the diagnosis of early prostatic carcinoma.¹

Needle or punch biopsy of the prostate through the perineum has never been widely adopted. Despite a few encouraging reports^{8, 10} many urologists have had brief and disappointing results with its use.

The present study was undertaken to evaluate and compare the results of digital rectal examination, prostatic smear, and needle biopsy in 110 cases of clinically suspected carcinoma of the prostate in both early and advanced stages of the disease. Either open perineal or transurethral biopsy was used as a standard in evaluating the results.

The study showed that with digital rectal examination as a method of detecting cancer of the prostate and with the biopsy needle as the confirmatory agent, a high degree of accuracy can be achieved in establishing the diagnosis of both early and advanced cases.

METHODS

On the basis of clinical, laboratory, and operative findings the cases were categorized as shown in Chart 1. Groups A and B represent disease still confined to the prostate and hence potentially curable by appropriate operation. Pictorial records were made of the digital rectal observations in all cases. For purposes of uniformity in interpretation, rectal examination of each patient was always done by one of the authors. Induration, nodularity, obliteration of sulci and fixation were the palpatory criteria used. Acid phosphatase determinations and roentgenological bone surveys were done in all cases and were helpful in classifying cases in Groups C and D. Biopsy was done whenever there was any question as to the nature of the palpatory findings even though in some instances the diagnosis of cancer was considered unlikely.

Examination of smears of prostatic fluid was done in 70 of the 110 cases, and the Papanicolaou

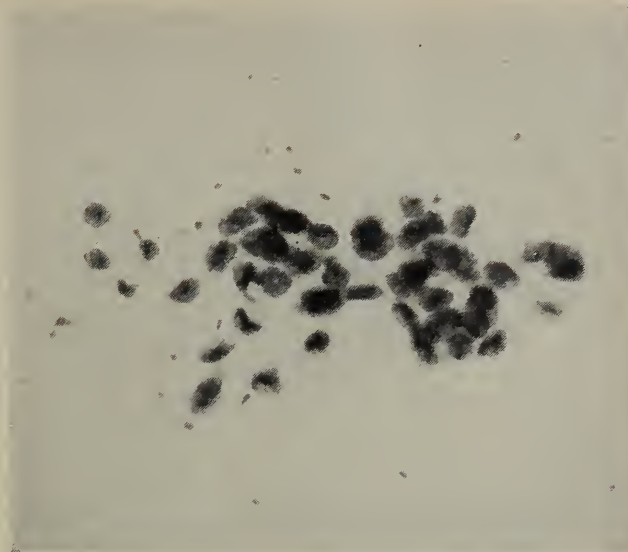


Figure 1.—Group of prostatic carcinoma cells showing nucleo-cytoplasmic disproportion and variations of nuclear size, shape and staining density ($\times 650$).

technique of preparation was used (Figure 1). Indwelling catheters, inability to obtain material by massage, and occasional tenderness of the prostate were interfering factors in the 40 cases in which smear examination was not done.

A VIM-Silverman biopsy needle was used almost exclusively in this series. The technique that gave the best results is one in which the needle is introduced just anterior to the anus. The needle is advanced anterior to the rectum and is always palpable by the finger in the rectum, which directs the tip to the suspected area in the prostate (Figures 2 and 3). Multiple cylinders of tissue were taken in the last 40 cases.

Open perineal biopsy was done in 80 of the 110 cases. Generous wedges of tissue were taken from the suspected area as well as from other less suspicious areas (Figure 4). Paraffin sections were made from the biopsy specimens in all cases. A distinct advantage of the open perineal biopsy is that it gives important information concerning fixation of the prostate, knowledge of which will affect any decision regarding the feasibility of radical prostatectomy.

Transurethral resection was done only when clinical observations indicated the need for relief of obstruction and not as a primary biopsy procedure.

Detailed descriptions of the technique of prostatic smear, needle biopsy, open perineal biopsy and transurethral biopsy are given elsewhere.⁷

RESULTS

In the present study the results of clinical impression, of prostatic smear examination and of needle biopsy were compared with the results of surgical



Figure 2.—Artist's drawing of needle biopsy technique. Center, needle advanced up to, but not into, nodule. Lower left, obturator removed and biopsy blades advanced into nodule. Lower right, outer sheath advanced and rotated, severing cylinder of tissue at its base.

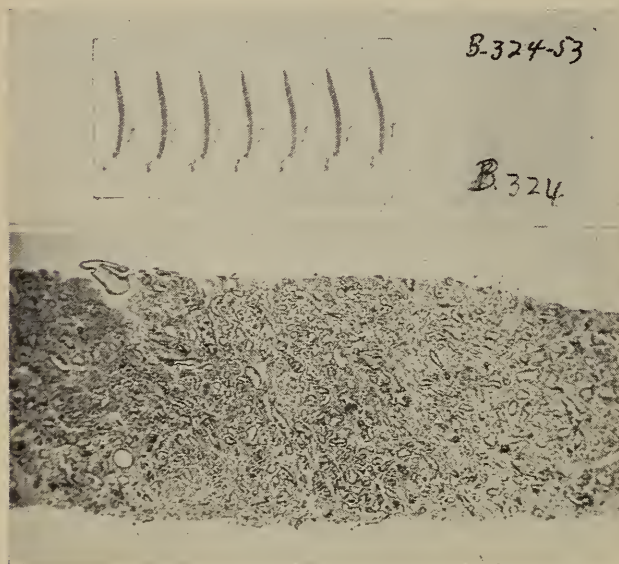


Figure 3.—Upper, microscopic slide showing multiple sections of Silverman needle biopsies of the prostate (slightly larger than actual size). Lower, low power photomicrograph of Silverman needle biopsy showing carcinoma ($\times 100$).

(open perineal or transurethral) biopsy. Open perineal biopsy, positive and negative, and positive transurethral biopsy were the standards. (Open perineal biopsy is not infallible but is generally agreed to be the most reliable method of confirming the diagnosis.) The results are shown in Table 1.



Figure 4.—Upper, view of wedge biopsy just taken at open perineal exposure of the prostate. Lower, microscopic slide showing size of open prostatic biopsy.

1. Clinicopathological Correlation

In Groups C and D the clinicopathological correlations were 95 and 100 per cent respectively. In Groups A and B the correlations were 47 and 53 per cent respectively, with an average of 50 per cent.

In only one instance in this series was carcinoma proved by needle biopsy in a case considered negative clinically. This was a case in Group B.

Carcinoma was erroneously suspected in 17 cases as proved by open biopsy. All the errors occurred in Groups A and B, which indicated "overdiagnosis" in cases in which there was suggestion of early carcinoma.

2. Correlation of Smear Examination and Biopsy

In advanced carcinoma (Groups C and D) the correlation of results of examination of smears and examination of tissue was 66 per cent, a figure somewhat lower than that achieved by other investigators.¹ In early cancers (Groups A and B) the correlation was 21 per cent. The greater correlation obtained in the advanced carcinomas is consistent with the presence of cancer in the major prostatic ducts or urethra; whereas when the tumor is small and still confined to the periphery, exfoliated cancer cells are less likely to be found.

3. Correlation of Needle Biopsy and Surgical Biopsy

The accuracy of needle biopsy was 82 per cent in advanced carcinoma and 65 per cent in Groups A and B. The results of needle biopsy in the last 39 cases show the benefit of experience and of multiple needle biopsies (Chart 2). In those cases the accuracy of needle biopsy was 100 per cent when compared with the results of open and transurethral biopsy. This is particularly rewarding when it is considered that the diagnosis of carcinoma was made from the needle biopsy in eight cases of Groups A and B. By contrast, the value of experience in the technique of using the biopsy needle is pointed up by the results of needle biopsy in the first 22 cases of this series, in which the correlation of needle biopsy and surgical biopsy was less than 50 per cent.

DISCUSSION





This study emphasizes the importance of digital rectal examination in detecting cancer of the prostate, not only in advanced cases but also at a time when surgical cure is possible. This is in contradistinction to the view held by some urologists that, once carcinoma is palpated on rectal examination, it is too late for primary surgical treatment.⁴ In this series cancer was found on only one occasion when, on the basis of digital rectal examination, it was considered unlikely. All the remaining error was made in "overdiagnosing" carcinoma clinically, and the correlation figures given in Table 1 indicate this error in overdiagnosis. This is considered a salutary trend since, without suspicion, early cases would be rarely diagnosed and there would be few cures.

TABLE 1.—Results of various methods of diagnosis of prostatic carcinoma

	Group A 28 cases	Group B 25 cases	Group C 38 cases	Group D 19 cases
Positive open biopsy.....	7	11	19	6
Positive transurethral biopsy....	0	1	16	13
Total	7	12	35	19
Positive clinical impression*.....	15	19	37	19
Accuracy	47%	53%	95%	100%
Positive prostatic smear†.....	2‡	1	8	9
Accuracy	17%	25%	42%	90%
Positive needle biopsy.....	5	7	26	17
Accuracy	71%	58%	74%	90%

*Errors made in overdiagnosis: Clinical Impression
Surgical Biopsy
†Figures represent accuracy of smear only in those cases in which both smear and biopsy were done.
‡One false positive smear.

OVERALL ACCURACY		ACCURACY IN GROUPS A AND B (Curable)	
Clinical	74%	Clinical	50%
Smear	45%	Smear	21%
Needle	73%	Needle	65%

							
A 8 CASES		B 12 CASES		C 13 CASES		D 6 CASES	
POS NEG		POS NEG		POS NEG		POS NEG	
SURGICAL BIOPSY 3 5		5 7		12 1		6 0	
CLINICAL IMPRES. 4 4		5 7		12 1		6 0	
NEEDLE BIOPSY 3 5		5 7		12 1		6 0	

CLINICAL ACCURACY - (39 Cases) - 92 %
NEEDLE ACCURACY - (39 Cases) - 100 %

Chart 2.—Relative accuracy by various means of diagnosis.

The results of prostatic smear examination in this series were generally in agreement with those obtained by other investigators.¹ The results were poor in confirming early cancers (Groups A and B). In advanced carcinoma the correlations were correspondingly better. The present series was too small, however, to warrant an accurate appraisal of this method. The fact that prostatic smear requires pathologists experienced in its special techniques and interpretation lessens its value. While the smear appears to be "second best" when compared to needle biopsy as a nonoperative means of confirming the diagnosis of suspected prostatic cancer, the true value of the method may still be in the detection of carcinoma in clinically unsuspected cases.⁹

The results of needle biopsy paralleled those of clinical evaluation on the basis of digital rectal examination. However, in the last 39 cases, after proficiency with the method was achieved, the results of needle biopsy surpassed those of clinical impression. The two methods are complementary, since without clinical palpatory suspicion there is no basis for needle biopsy. Furthermore clinical findings (in the absence of positive results of bone survey, acid phosphatase determination or examination of marrow aspirate) provide only an impression, while a positive result of needle biopsy gives a definitive diagnosis.

Needle biopsy will obviously not compete with open perineal biopsy as a means of ruling out carcinoma, but this does not detract from its value. It is a procedure which can be done in the office under local anesthesia. Many patients may object to a diagnostic operation such as open perineal biopsy which involves hospitalization and anesthesia. When the needle biopsy is positive in cases of Groups A and B, the physician can proceed directly with radical prostatectomy either by perineal or retropubic approach. If a positive result is obtained by needle biopsy in Groups C and D, and transurethral resection is not indicated for relief of obstruction, estrogen therapy with or without castration can be undertaken with the assurance of confirmed tissue diagnosis. Intraprostatic injection of radioactive colloidal gold and chromic phosphate is now under trial as palliative treatment for advanced cancer of the

prostate. In advanced cases, positive tissue diagnosis achieved without recourse to surgical exposure of the prostate is of great value before treatment with isotopes is instituted. In addition, needle biopsy can be used when follow-up histological examinations are desired to evaluate the effects of various palliative treatments in Groups C and D.

If the result of needle biopsy is negative, the procedure can be repeated at intervals of two or three weeks. If the results are consistently negative and the clinical impression is one of carcinoma, open perineal exposure and excision of generous biopsy specimens are in order.

The possible dangers of needle biopsy deserve mention. No complications have occurred in the 110 cases in this series in which the Silverman needle was used. In one patient in whom a large punch biopsy instrument was used, a huge pelvic hematoma requiring surgical drainage developed. The dangers of perforation of the rectum, bladder or urethra with the resultant possibility of fistula have occurred to many urologists. In this series the rectum was accidentally entered four times and the bladder was penetrated on more than ten occasions without untoward sequelae, despite the fact that no special measures were taken following their occurrence.

The possibility of implanting cancer in the path of the needle seems remote in view of the fact that no such cases have been reported.*

The difficulties of making a tissue diagnosis from a needle biopsy have been stressed by others. However, if several adequate cylinders are taken, sufficient tissue will be available for a pathological interpretation. No special training or experience is necessary in interpreting the slides as is the case with the Papanicolaou smears. There may be cases where the pathological diagnosis is doubtful, but with repeated multiple biopsies many such problems will be resolved.

In conclusion, improved diagnosis of cancer of the prostate is not difficult to achieve. In early (operable) cases presumptive diagnosis can often be made on the basis of digital rectal findings. "Overdiagnosis" of cancer is excusable. With needle biopsies, microscopic confirmation can be achieved in a large percentage of patients suspected clinically of having cancer of the prostate. Open perineal biopsy should be made after repeated negative needle biopsies in clinically suspected cases. Positive microscopic diagnosis of prostatic cancer in Group A or B is definite indication for total excision of the prostate and seminal vesicles in patients who have a statistical life expectancy of ten years. In late (inoperable) cases presumptive diagnosis can be made on the

basis of digital rectal examination. Metastasis to bone and elevated acid phosphatase provide reliable confirmation of the diagnosis, but in the absence of these phenomena—and often they are absent—the needle biopsy may provide histological justification for castration and other forms of palliation.

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Discussion by BRADFORD W. YOUNG, M.D., San Francisco

This excellent study serves to reemphasize an efficient method of applying the well established surgical principle of simple biopsy in carcinoma of the prostate. There has been a tendency to neglect this procedure in this disease. Needle biopsy of the prostate for suspected early carcinoma fills the gap neatly between the potentially overenthusiastic clinical suspicion and the open perineal biopsy with its drawbacks of hospitalization, anesthesia, expense and the often equivocal results of frozen section diagnosis.

The place of needle biopsy in the diagnosis and management of carcinoma of the prostate appears to lie in two separate stages of the tumor: (a) The incidental small nodule discovered on routine rectal examination, and (b) the extensive, fixed carcinoma without severe obstruction, which is to be managed with hormonal control. Of these the former is the more important, certainly, for in these tumors we stand the only chance of cure. In the second type of tumor a positive biopsy (though statistically in this study of no greater accuracy than clinical impres-

*A recent article by Clark, B. G., Leadbetter, W. F., and Campbell, S. J. (J. Urol., 70:937-939, 1953) reports the first recorded case of implantation of prostatic carcinoma in the site of perineal needle biopsy.

sion—i.e., the authors' Groups C and D) can be of paramount importance when orchiectomy or adrenalectomy is planned.

The quixotic prostatic carcinoma is a disease in which the tendency of the physician is to make his therapeutic moves in response to the progress of the cancer—treating obstruction with resection, extension with estrogens, metastasis with orchiectomy, and “autonomous” growth with last ditch cortisone or adrenalectomy. The timing and combinations of these measures vary widely, but the general principle is one of response to the tumor. Unfortunately, in all but the earliest cases this has to be the case, but it is not ideal management.

In carcinoma of the prostate we have at this time probably the most effective agents for combating an established cancer: The estrogens and methods of withdrawing the androgenic support of tumor growth. Still the ultimate biochemical weapon with an effectiveness of the order of that exhibited by insulin in diabetes or Terramycin against a sensitive strain of *Escherichia coli*, is not yet available. This leaves us in a philosophical limbo in which early

radical operation still offers the best opportunity of cure, and our estrogenic weapons must be reserved to support the attack. This course rests upon positive biopsy more securely than any other single diagnostic measure. The perineal needle-biopsy method for obtaining tissue for study simplifies the procedure greatly and should submit many more suspicious prostatic nodules to close scrutiny under the microscope. This will accordingly present more early cases for radical prostatectomy.

The objections to needle biopsy of the prostate are well outlined by the authors, and I agree that they are of minor importance when weighed against the advantages of early diagnosis—with this great accuracy. However, I can visualize a respectable hematoma from a lacerated hemorrhoidal vein in occasional cases. Also it has been estimated that some prostatic carcinomata (probably less than one third) arise in the anterior portion of the gland. These are unfortunately inaccessible to either the examiner's rectal finger or the perineal needle, and represent a remaining hiatus in early diagnosis of this disease.

Veterans' Care

Following are excerpts from Franklin D. Roosevelt's veto message to Congress on Appropriation Bill relating to World War veterans, March 27, 1934:

“I COME NOW to the provisions in this Act relating to World War veterans. First let me speak of principles. Last October I said this to the American Legion Convention:

“The first principle, following inevitably from the obligation of citizens to bear arms, is that the Government has a responsibility for and toward those who suffered injury or contracted disease while serving in its defense.

“The second principle is that no person, because he wore a uniform, must thereafter be placed in a special class of beneficiaries over and above all other citizens. The fact of wearing a uniform does not mean that he can demand and receive from his Government a benefit which no other citizen receives. It does not mean that because a person served in the defense of his country, performed a basic obligation of citizenship, he should receive a pension from his Government because of a disability incurred after his service had terminated, and not connected with that service.

“It does mean, however, that those who were injured in or as a result of their serving are entitled to receive adequate and generous compensation for their disabilities. It does mean that generous care shall be extended to the dependents of those who died in or as a result of service to their country.

“I am very confident that the American people, including the overwhelming majority of veterans themselves, approve these principles and in the last analysis will support them.”

Childhood Ecology

Factors Influencing Maturation

H. E. THELANDER, M.D., San Francisco

WEBSTER defines ecology as the biology dealing with the mutual relations between organisms and their environment. Poets and philosophers have said it more succinctly in phrases like "The boy is father of the man," "As the twig is bent the tree will grow," and "The proper study of mankind is man." The less astute in everyday parlance, however, are still consoling themselves with "He will outgrow it."

It would indeed be presumptuous in a communication no longer than the present one, to attempt anything except to point the direction that physicians and personnel from other disciplines dealing with children might take in order to better understand and enjoy the work and possibly help elucidate the subject of human maturation. The key to the riddle undoubtedly lies in the totality of growth and development, the intrinsic and extrinsic factors that influence the various facets.

The expanding world of childhood may be outlined as follows:

Infancy:

Dependency—Gratification of elementary needs as hunger, discomfort, etc.

1 to 3 years:

First Autonomy—Ambulation; self-feeding; speech; elimination.

3 to 7 years:

First Basic Facts—Sex identification; birth, death; living, non-living; fact, fancy; truth, falsehood; imaginary playmates.

This is followed by the school age period when the tools of learning are acquired; and this takes the child into adolescence or the second autonomy.

The particular human characteristics involved in the process of growing up and maturing are:

1. Physical growth with intrinsic and extrinsic factors influencing it, such as heredity and genetics on one hand and nutrition and disease on the other.

2. Intelligence, influenced partly by inherent ability, partly by opportunity, training and motivation.

3. Feeling or emotions with intrinsic factors of temperament and sensitivity acted upon by the reception encountered by other members of the species.

Through the work of such physicians as Gesell and Washburn as well as many others, pediatricians have come to understand better the physical growth of children. Educators and psychiatrists have eluci-

• An attempt has been made to pick out of the whole study of childhood ecology three of the fairly well known areas involved in maturation, namely physical growth, intellectual development, and emotional reactions and to indicate not only the uniformity of patterns in each of these throughout life but the effect of certain adverse factors in deterring normal maturation. The areas are interdependent and failure of the child to master any level of his development adequately influences adversely the total development of his personality.

dated the learning process and the psyche. Seldom, however, do the three disciplines sit down together and really talk it over.

It is interesting to discover, in support of the earlier quotations in this paper, that the learning process does not change particularly its pattern throughout life even though the tools that are employed vary. An infant six months of age approaches a new object by picking it up, passing it from hand to hand, shaking it, and putting it in his mouth. These are the tests of safety and desirability to which he subjects the object before accepting what is new. A scientist takes a new chemical, weighs and measures it, puts it through various experiments in the test tube in a manner very similar to that of the infant making his explorations.

A one-year-old gets his foot caught between the bars of his crib, cries and struggles until it is released. Then what does he do? He puts it right back to see if he can repeat the performance. This is the pattern Fleming followed when he discovered that a mold on culture media had destroyed some of the bacteria, then tried to reproduce the phenomenon by cultures deliberately contaminated.

A child three years of age, when he has put the problem of gaining his first autonomy behind him, discovers, among other things, sex. To him there are boys and girls, men and women. It intrigues him and he may be quite preoccupied with his new interest. His conversation, described by elders as "cute sayings," may run like this: "You are made like mama," or "Boys stand up to wee-wee and girls sit down." Finally when he has solved the mystery he announces repeatedly and at the most unexpected times, "When I grow up I am going to be like daddy." Gradually the interest subsides because it is an accepted fact.

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Note the similarity in our own field. The discovery of a drug like sulfonilamide and its final place in our armamentarium can be charted by counting the articles concerning it in the *Index Medicus* over a period of a few years. In other words, throughout life a new idea attracts us, it emerges, gets worked over until it is understood and assimilated, then it is relegated to its proper place in our fund of knowledge.

It is logical, therefore, to raise the question: Does the management of curiosity in early childhood determine to some extent the continuation of interest, enthusiasm and exploration in later life? The adult who ceases early to learn or even to have any desire to learn can be contrasted with the person who may be described as having insatiable curiosity. Does environment partly determine this difference?

In the field of the emotions, again, patterns of reaction are laid down early and probably change little throughout life. In the normal home situation the infant quickly responds to the mother's attention. When he is hungry she feeds him, when he is uncomfortable she comforts him, when she faces him she smiles and plays with him and he learns to goo and coo in return. Pediatricians are familiar with a contrast to this behavior—that of the child who has been reared in an institution without maternal care or any mother substitute in the environment. When such a child is adopted, we have all wondered on a first examination from his behavior whether he is hard of hearing, whether he has poor vision, or whether he is mentally retarded, only to observe pronounced change even after two weeks with a mother. If neglect is prolonged and extreme, he may never learn to react in a wholesome manner to other persons in his environment; may seem to lack the ability to discover any satisfactory interpersonal relationships. This is the common history and pattern in delinquency and crime.

In contrast, gratification in accomplishment is recognizable early. An infant learning to walk shows both pride and pleasure on taking the first step. The motivation for continued experimentation in the field of walking is augmented by the reception the child gets from his parents. This pattern again continues throughout life. We need only cite the pride of the young doctor on receipt of his first check. How often have we heard, "I am going to frame it." And if his wife shares in the pride and pleasure, is he not motivated to greater accomplishment?

The first six or seven years of life, as again was noted by nonmedical people even before confirmed by scientists, are the important ones for establishing patterns of reaction to people and situations and possibly also for dealing with curiosity, interest and enthusiasm. By this age, six or seven, the child has established his reaction to certain basic things in life, as noted in the developmental scale—namely,

the acceptance of himself as a person, male and female roles, reaction to authority, birth and death, truth and falsehood, establishment of interpersonal relations. He then enters the school age where he acquires the tools of learning, primarily the "three R's."

The serenity of this period of childhood is interrupted by a growth factor within the organism and suddenly the child is faced with the problem of establishing his second stage of autonomy—namely that of being an adult; and so he enters the turbulent adolescent years.

Thus growth, intelligence and emotion constitute a totality of factors which influence the personality development.

In the expanding world of childhood it is important that each phase be mastered somewhat adequately before the next is entered. If this is not accomplished, progress in the next phase is warped. This is best illustrated by reading ability in school. If the child is unable to master reading in the first grade and is passed on to the next grade, his progress is retarded and he cannot advance until he has in part accomplished his reading. The emotional effect of this, as is well known, can be very great. It is equally true that failure in infancy to develop trust or in the period of one to three years of age to develop a feeling of adequacy may cause later severe emotional disturbances.

Enough evidence has accumulated now to document this concept. Early childhood, as far as personality growth is concerned, is as vulnerable to certain adverse factors as is physical growth in the early period of the fetus to a virus such as that of German measles. The factors or "viruses" that influence development of personality are gradually merging. Among those fairly well established now are abandonment without a mother-substitute in infancy, rejection—overt or subtle—during early childhood, long periods of separation without a mother-substitute, especially in the first three years, as shown by Bowlby¹ in his analysis of separation of children during the war, and in another area such studies as Johnson and Szurek's² on the effect upon children of a parent's neuroses, wherein a child in the family is made the scapegoat of a parent's unresolved emotional conflicts and plays the role of a delinquent or criminal. All too frequently physicians, parents and teachers have avoided responsibility by assuming that the child will "outgrow it." It is time that pediatricians, psychiatrists and educators diligently further explore preventive measures against warped personality development.

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Functional Uterine Bleeding

Etiologic Factors and Therapy

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IT IS CONVENIENT to divide cases of excessive uterine bleeding into two general classes, those in which the cause of bleeding is readily ascribed to observable pathologic conditions, and those in which it is assumed to be from "functional" causes. A practical definition of functional uterine bleeding is bleeding that is not associated with neoplastic, inflammatory or trophoblastic change within the pelvis. Obviously, in such circumstances the cause is difficult to diagnose.

HISTORICAL SURVEY

Historically, the development of knowledge of the endometrial patterns associated with functional uterine hemorrhage presents a fascinating story. The recovery from the early misleading nomenclature was a masterful feat in itself, but the persistence of erroneous theories long after the true situation was established is rather dismaying. A brief historical sketch is necessary to an understanding of the confusing and mixed nomenclature associated with various descriptions of this subject.

With the introduction of the curette into gynecology by Recamier in 1850,¹⁹ endometrium was removed for study. Grossly the tissue had a "fungal" and "granulation-like" appearance, and although there was frequently little departure from what we now consider normal endometrium it was assumed that this "fungal" condition was the result of inflammation. In 1875 Olshausen¹⁸ reported a study of *Chronische Hyperplasierende Endometritis* (Endometritis Fungosa) and in 1879 Ruge²⁰ wrote on *Aetiologie und Anatomie der Endometritis* describing a glandular, interstitial and "mishform" type. These reports, as well as those by others such as Duncan⁵ in the English literature, served to perpetuate descriptions that emphasized inflammation—"endometritis fungosa," "endometritis polyposa," and "hemorrhagic endometritis." In 1882 Brenneche³ suggested that Olshausen's "endometritis fungosa" was not inflammatory change but true hyperplasia. He observed further that the endometrial changes were the result of ovarian abnormalities, and termed the condition "endometritis hyperplastica ovarialis." Despite Brenneche's postulates and the later bacterial confirmation of the noninflammatory

• *Endometrial hyperplasia and irregular shedding of the endometrium comprise the largest group of known causes of functional uterine bleeding.*

Most patients with functional uterine bleeding have a normal endometrial pattern.

In a series of patients with functional uterine bleeding, it was noted that 69.7 per cent of endometrial specimens reported as normal showed evidence of hyalinized tissue which included endometrial glands. Tissue of this type was noted in only 3.5 per cent of curetted specimens from patients without functional uterine bleeding.

Diagnostic uterine curettage is the initial step in the management of functional uterine bleeding.

Hysterectomy and radiation castration are seldom necessary in the management of functional uterine bleeding and are indicated only under specific circumstances.

nature of the endometrium, and despite the acceptance of these observations by such authorities as Shauta and Cullen, the previous view persisted.

It was not until 1908, when Hitschmann and Adler⁸ from Shauta's clinic in Vienna published their classic work on normal cyclic changes in the endometrium, that it became apparent that so many of the previously described conditions were not inflammatory processes. Their article was beautifully illustrated and accompanied by classic descriptions of each phase of the cycle. Not long afterward (1912) Schröder²² published his fundamental investigations on the relationship of the endometrial cycle to the ovarian cycle. He also described in detail the entity of cystic glandular hyperplasia of the endometrium and correlated it with specific changes in the ovary.²³ Indeed, it was he who suggested²⁴ the term "metropathia hemorrhagica" for this condition. It was at this point that the present concept of the ovarian-endometrial cycle and the nature of endometrial hyperplasia became firmly established. Since that time the less frequent causes of functional uterine bleeding have been described and explained with varying degrees of successful acceptance.

Numerous references to and descriptions of delayed or irregular shedding of the endometrium^{1, 4, 12}

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were made before Meyer¹⁷ described the entity so completely in 1930. In the American literature Traut and Kuder (1935)²⁷ described irregular shedding and irregular ripening of the endometrium and stated that these disorders were the etiologic factors in one-third of the cases of functional bleeding observed by them. Later McKelvey (1942, 1947)^{13, 14} and Holmstrom and McClennan (1947)⁹ firmly established the verity of irregular endometrial shedding with the publication of their carefully selected studies. According to Traut, irregular ripening is characterized by intermenstrual bleeding associated with a condition of patchy distribution of both secretory and nonsecretory endometrium. Irregular or delayed shedding of the endometrium is characterized by prolonged (seven or more days) and often excessive cyclic uterine bleeding associated with the persistence or retention of secretory endometrium five or more days following the onset of menstruation. As opposed to endometrial hyperplasia it has no predominance in the menarche or climacteric. Holmstrom and McClennan were able to produce this clinical picture by administering progesterone during the bleeding phase of the menstrual cycle. McClennan (1952),¹⁶ reporting the largest series to date, emphasized the effectiveness of curettage in therapy.

As to the causes of uterine bleeding considered "functional" in nature, only bleeding associated with endometrial hyperplasia and delayed endometrial shedding has been satisfactorily explained. Holmstrom and McClennan expressed mild skepticism concerning irregular ripening as a substantial cause of metrorrhagia. The following is a list of the endometrial conditions which have been observed in careful histologic studies of curetted endometrium associated with functional uterine bleeding:

1. Endometrial hyperplasia
2. Delayed endometrial shedding
3. Irregular endometrial ripening
4. Normal endometrium (a) secretory endometrium, (b) proliferative endometrium, (c) menstruating endometrium.

The reported proportions of the various types of endometrium have varied from study to study. Endometrial hyperplasia has been reported in from 23 to 68 per cent of cases, with most observers reporting a 30 to 40 per cent incidence.²⁶ The reported incidence of nonhyperplastic endometrium has varied from 30 to 70 per cent, with delayed shedding making up 7 to 15 per cent of this group. Recently Sutherland²⁵ in two masterful surveys of "functional" uterine bleeding compared the type of endometrium in 1,000 patients without "organic" pelvic lesions with the type in 1,000 patients with gross anatomic defects (Table 1). The proportions of the endometrial types in the two groups were remarkably similar. Unfor-

TABLE 1.—Condition of endometrium of 1,000 patients without organic lesions, as compared with condition in 1,000 patients who had gross anatomic defects (after Sutherland²⁵)

Endometrium	Patients without Organic Lesions	Patients with Anatomic Defects
Normal	547	648
Hyperplasia	265	195
Irregular Shedding and Ripening.....	39	18
Others (non-functional)	149	139
Total	1000	1000

tunately, in the largest group of patients, those with normal endometrium, the mechanism or cause of bleeding has been poorly explained. Certainly it is agreed that abnormal bleeding may arise from any type of endometrium, secretory included.¹¹ This situation has led to undue emphasis of such explanations of bleeding as nutritional deficiencies (vitamin B complex),² low thyroid function,⁷ increased capillary fragility (vitamin P),⁶ and increased plasma protamine titrations.²⁰ These explanations, in the authors' experience, apply to only a small percentage of this large group of functional bleeders.

ANALYSIS OF MATERIAL

In a retrospective study, the records of patients with functional uterine bleeding observed in the gynecologic clinic in a 3-year period 1950-1953 were reviewed. The clinical courses were carefully considered to establish the condition of abnormal uterine bleeding, and then all cases in which there was a pelvic neoplasm, pregnancy effect, pelvic inflammatory condition, or non-neoplastic pelvic tumor (such as adenomyosis or endometriosis) were excluded from the study. In all, the series included 235 women and, as initially considered, the types of endometrium encountered were:

	Number	Per cent
Endometrial hyperplasia.....	50	21
Proliferative endometrium.....	103	44
Secretory endometrium.....	64	27
Menstrual endometrium.....	18	8
Total	235	100

It was noted that in 79 per cent of cases there was no anatomical diagnosis to account for the abnormal bleeding. It must be emphasized that, during this period, a concerted effort was not always made to time the curettage in order to obtain the maximum chance of demonstrating the diagnosis histologically. While this timing was always desired it was often impractical and, occasionally, impossible. In spite of the inopportune timing of the curettage, the small percentage of definitive diagnoses led the authors to consider the normal endometria in more detail.

In reviewing the clinical records and histological specimens, it was possible to diagnose delayed endometrial shedding in 23 patients (Figure 1). These were patients in the proliferative endometrium

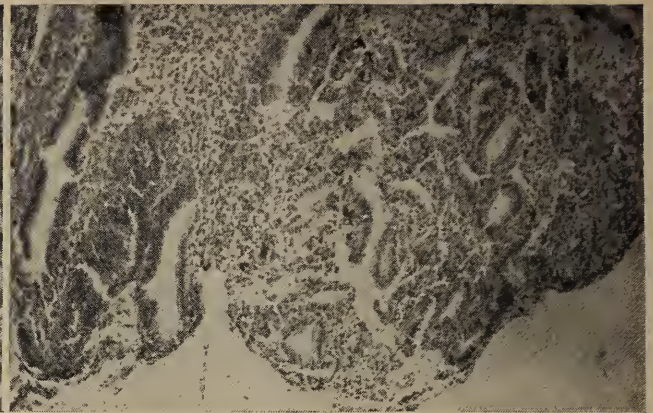
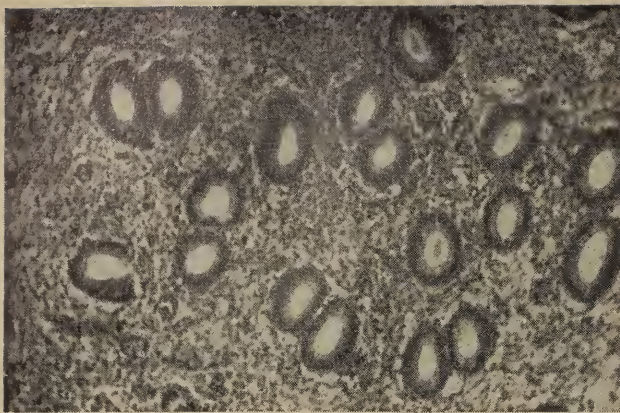


Figure 1.—Irregular endometrial shedding. Note normal proliferative endometrium (seventh day of cycle) on the left and collapsed secretory glands on the right.

TABLE 2.—Association of endometrial abnormalities in 235 cases of functional uterine bleeding abnormality and normality of endometrium.

	Normal endometrium	Abnormal endometrium	
Endometrial hyperplasia.....		50	} 31%
Irregular shedding		23	
Proliferative endometrium			
Normal	21		
With hyalinized tissue		59	} 48%
Secretory endometrium			
Normal	21		
With hyalinized tissue.....		43	
Menstruating endometrium			
Normal	8		
With hyalinized tissue.....		10	
	50 (21%)	185 (79%)	

group, who had noted a prolongation and/or increase in cyclic menstrual flow, in whom retention of late secretory endometrium was confirmed on the fifth to seventeenth day after the onset of menstruation. Normally the secretory endometrium should have been shed by at least the third day of menstruation. Often the retained secretory endometrium was degenerating and was surrounded by varying amounts of a hyalinized type of tissue (Figure 2). In this respect it is noteworthy that a large number of specimens in the normal endometrium group also showed this hyalinized tissue. The hyalinized tissue usually contained, or surrounded in intimate association, degenerating endometrial glands and was infiltrated by varying numbers of fibroblasts (Figure 3). Characteristically, no inflammatory reaction was present. Table 2 indicates the number of cases in which this endometrial pattern was associated with the 235 cases of functional uterine bleeding.

It was noted that hyalinized tissue of this kind was found in the curettings from functional bleeders in both proliferative and secretory phases of the menstrual cycle. The addition of these cases to the others with abnormal endometrium makes it possible to associate the abnormal bleeding with an anatomically demonstrable factor in 79 per cent of the pa-

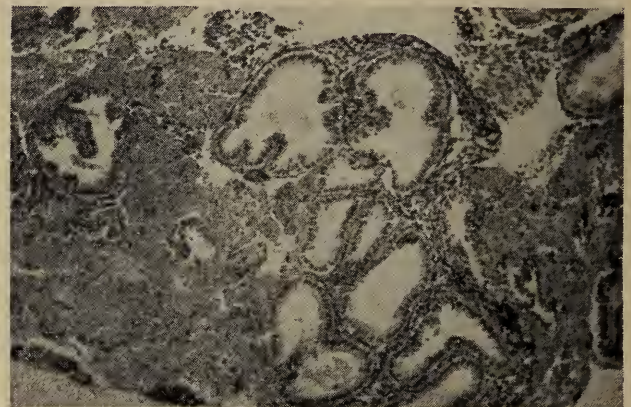


Figure 2.—Irregular endometrial shedding. Note the retained secretory endometrium intimately surrounded by hyalinized tissue.

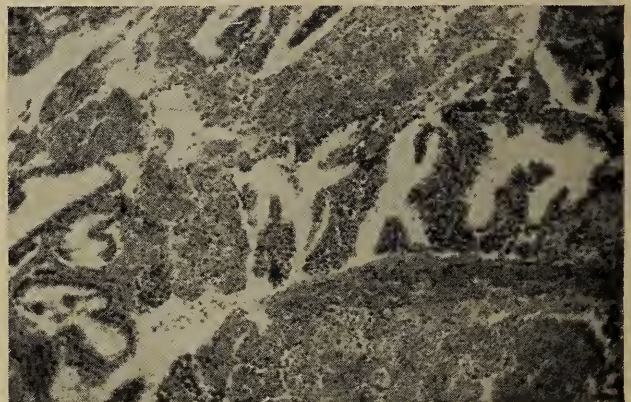


Figure 3.—Hyalinized substance surrounding endometrial glands. The hyalinized material is extensively infiltrated by fibroblasts.

tients. It was frequently possible to identify the glands contained within the hyalinized substance as either proliferative or secretory. When such retained secretory endometrium was found in association with proliferative endometrium (Figure 4), it suggested delayed or irregular shedding of the endometrium. However, it must be emphasized that such conclusions are warranted only when the clinical restrictions ascribed to irregular shedding of the endo-

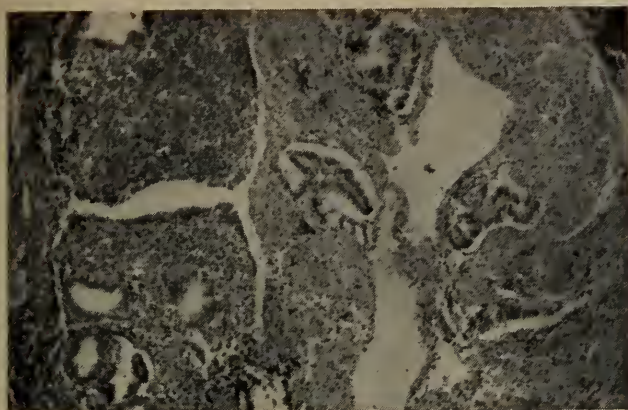


Figure 4.—Secretory glands included within hyalinized substance. Note proliferative endometrium on the right.

metrium have been satisfied. The authors prefer to call it retained, hyalinized endometrial tissue.

How often is this hyalinized tissue observed in the absence of abnormal uterine bleeding? To answer this question, the tissues curetted during the same period from patients who were menstruating normally were reviewed. In large part the patients had had curettement routinely at the time of a vaginal plastic procedure. The following findings were noted:

	No. cases	Per cent
Normal secretory endometrium.....	12	93
Normal proliferative endometrium.....	12	
Proliferative endometrium with hyalinized tissue	1	3.5
Endometrial hyperplasia.....	1	3.5
Total	26	100

Thus, a high incidence of the phenomenon of hyalinized tissue retention was noted in association with abnormal bleeding and a low incidence in normally menstruating women. It is possible that endometrial glands retained through the bleeding phase of menstruation might continue as a stimulant for further bleeding. Blood surrounding these accumulations could organize to form just such a histologic structure as that described. This tissue, once organized and firmly attached, might serve as a focus of continued bleeding. It is equally possible that any bleeding, including that associated with menstruation, might result in clotted blood becoming organized and eventually bring about the phenomenon. When degenerated glands within hyalinized tissue are observed, especially early in the menstrual cycle, there is strong suggestion they were retained from a previous cycle. This picture of hyalinization and retention is noted here only insofar as it supports evidence of previous abnormal bleeding and possibly the abnormal retention of endometrial elements. Of academic importance is the possibility that retained hyalinized fragments, with included endometrium, account for bleeding in a substantial number of patients with functional uterine bleeding. With this a possibility, there is further justification

for uterine curettage as a logical therapeutic measure in such cases.

DISCUSSION

Quite naturally the management of abnormal uterine bleeding will vary with the age and parity of the patient, especially if the bleeding is designated as functional. A practical scheme of management is to consider the following measures in order:

1. *Uterine Curettage.* A sound principle in the management of undiagnosed menometrorrhagia is to be as radical as necessary to make sure malignant disease is not present and, after a benign cause has been established, to be as conservative as possible in the treatment. As an initial measure, thorough curettage is usually best for the following reasons: It eliminates or establishes malignancy as a cause; it establishes the diagnosis on a sound basis; it is the most effective method of stopping the bleeding initially; and it is associated with cure in approximately 50 per cent of cases of functional bleeding.

It is prudent, of course, to follow McClellan's advice (1951)¹⁵ and carry out curettage at the best time for establishing the diagnosis histologically. It cannot be too strongly emphasized that curettage, not hysterectomy, is the initial definitive measure in the diagnosis and treatment of abnormal uterine bleeding.

2. *Diet and General Measures.* Experimentally and clinically the Biskinds and others have noted the value of dietary measures in functional uterine bleeding. The fact that vitamin B complex is necessary for the proper metabolism of estrogens in experimental animals cannot be directly applied to clinical therapy but it is logical to treat any associated systemic disease or dietary deficiency. However, such conditions have been observed by the authors in relatively few patients.

3. *Cyclic Steroid Hormone Therapy.* Curettage is vastly superior to large repeated doses of estrogens in the initial suppression of alarming uterine bleeding. If the patient does not respond to curettage, cyclic suppression and release of gonadotrophic activity by estrogen administration is then in order. Stilbestrol by mouth for 21 days, then a seven-day period in which the hormone is not given constitutes the cycle. The dose of 0.5 mg. to 3.0 mg. per day may be increased from the first to the third week, and in the authors' experience stilbestrol is as effective and as well tolerated as the more expensive estrone sulfate or estradiol. In order to luteinize the endometrium and perhaps bring about a more physiological type of withdrawal bleeding, 25 mg. of progesterone may be given orally each day during the third week of the cycle of hormonal treatment, or, if convenient, 1 cc. of progesterone (50 mg. in aqueous suspension) may be given intramuscularly on the twenty-first day. In controlling bleeding asso-

ciated with anovulatory cycles, Holmstrom¹⁰ used only a 25 mg. injection of progesterone each month, thereby eliminating the use of estrogens in a condition felt to be caused by an excess of estrogens. By and large, the reasoning behind the use of cyclic steroid therapy is logical; and clinically the treatment is often effective. Perhaps a valuable feature of the therapy described is that it allows the passage of time in a disease which is usually self-limited.

4. *Androgen Therapy* in functional uterine bleeding is rational only in controlling the initial phase of bleeding. The disadvantages (i.e., masculinization) of its continued use are disconcerting and the method does not seem physiologically sound.

5. *Hysterectomy*. This is a radical method of treating functional uterine bleeding. It is indicated only in women less than 45 years of age when an adequate trial of more conservative measures has proved ineffective. For patients under the age of 35 this procedure is seldom necessary and should be considered with grave concern. This hesitancy is justified in the younger age group not only from the standpoint that hysterectomy is seldom necessary but also because the procedure interrupts a substantial portion of the ovarian blood supply. Also, sudden cessation of menses in a young woman may have more profound effects than are usually anticipated.

6. *Radiation Castration*. This is also a radical method of treating uterine bleeding of benign cause and has been increasingly criticized as operative procedures have become safer and more widely used. However, it does have a place. The use of 1500 r of pelvic x-radiation, or 1500 mg. hours of intrauterine radium is usually sufficient for the purpose and is definitely indicated, in functional uterine bleeding, for patients over 45 years of age in whom adequate conservative measures have proved ineffective. It is best that these age figures be regarded as physiologic estimates rather than as chronologic. In this way a logical flexibility may be exercised. Radiation castration is also indicated as a last resort in the case of younger patients whose general condition contra-indicates major operation.

The problem of managing functional uterine bleeding is somewhat simplified by the consideration of two observations: (1) Curettage alone cures functional bleeding in approximately 50 per cent of cases; (2) the majority of cases occur during the menarche or the climacteric, periods which in themselves are temporally limited and consequently act as self-limiting effects. This knowledge encourages temporization with the employment of conservative measures. Such measures discourage the use of irreversible radical procedures while the body is making the necessary adjustments to correct the abnormal bleeding.

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Detection of Small Lesions of the Large Bowel

Barium Enema versus Double Contrast

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FIFTEEN PER CENT of patients over 50 years of age have polyps in the rectum or colon. The available evidence indicates that probably all polyps of the colon are potentially malignant. They should therefore be detected and eradicated. If the clinician who first sees these patients performs a digital examination and sigmoidoscopy, he will find by far the largest proportion of these polyps and even some early cancers. Radiologists should discover many of the polyps that are above the sigmoidoscopic level. In this way, the incidence of cancer of the colon and rectum, which now causes 17 per cent of all cancer deaths, should be measurably reduced; removing a polyp may prevent a cancer. At one time or another the author has tried the various methods of studying the bowel that other investigators have advocated, has used personal modifications and has tested many barium preparations. The conclusion reached is that the so-called opaque barium enema, with some modifications, is as superior to the double contrast study as the primary means of demonstrating polyps in the colon as it is for other lesions.

Gianturco^{2, 3, 4} described a technique with which he was able to demonstrate polyps in 2.5 per cent, or 42, of 1,500 patients. Yet 75 per cent of these patients did not have rectal bleeding. His results are amazing—almost what one might expect in an autopsy series. The author's own technique has a little bit of everybody in it—Schatzki, Templeton, Weber, Jones and Kaplan, Irwin, Ichiban Mori and Devine, and others, But mostly Gianturco.

The principal features of his technique are:

1. A clean bowel. (A clean bowel is absolutely essential.)
2. Films taken with the highest feasible kilovoltage (preferably over 100kv).
3. A barium suspension which is dense enough for good fluoroscopy yet can be penetrated by the x-ray beam. (The idea is to get through the barium, not just around it.)
4. Views of the uncoiled sigmoid colon taken with the overhead tube just as soon as the barium has reached the descending colon.

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• Roentgen study with the so-called opaque barium enema with some modifications is superior to double contrast study as the primary means of demonstrating polyps in the colon as well as other lesions. The method described combines fluoroscopy, high kilovoltage radiography, fluoroscopically aimed "spot films" taken with compression, suction and evacuation studies. In this way unsuspected as well as suspected polyps can be demonstrated, particularly if attention is directed to the region where polyps are most likely to be found—namely, the distal third of the large bowel.

Double contrast study is quite valuable as a supplement to the modified "single contrast" barium enema, but it has not been sufficiently perfected to replace the modified opaque barium enema as a primary procedure.

In many instances a combination of methods will, of course, be required.

5. Anterior-posterior and posterior-anterior films of the filled bowel.

The author's own technique, somewhat more elaborate, includes the above, plus the following:

6. Many small spot films of the distal colon with compression (90 to 100kv). This is a very important feature.

7. Fluoroscopy that is perhaps more diligent than Gianturco's.

8. Postevacuation films.

Gianturco's patients are of the type generally seen in any large private clinic. The author's are all office patients, many of them in the older age group, and more of them have symptoms, although 25 per cent of the polyps demonstrated are in patients without any bleeding, and in many that do have bleeding the bleeding could be ascribed to hemorrhoids. The additional procedures mentioned, it is believed, increase accuracy. Moreover, all the additional views are good to have should the technician fail to secure well penetrated films of the filled bowel. It must be remembered that there is no magic in high kilovoltage radiography *per se*. It is only a means of getting through the opaque medium. Compression spots

do this better since excess barium is pushed aside, the permanency and nature of defects are easier to demonstrate, and the defect can be shown in many more aspects. However, spot filming the entire colon is obviously impractical, and therefore the barium enema study of the colon, made translucent by high kilovoltage, is invaluable, for it shows the entire bowel well.

Christie, Coe and Hampton¹ described a technique that relies principally on evacuation films. With it they discovered polyps in 1 per cent and cancers in 1 per cent of a large group of patients. Gianturco does not use evacuation studies. The author finds, however, that many defects disappear after evacuation if they are of fecal or similar temporary nature. Thus reexamination is not necessary to determine whether or not they are permanent. Conversely, the persistence of a defect, at first considered to be merely one of many obviously fecal masses, has on several occasions led to the further investigation which demonstrated that it was caused by a polyp. Sometimes evacuation films actually show the lesion best—usually the larger polyps.

Templeton and Addington¹² described the advantages of siphonage. The author uses the three-way valve developed by Templeton and applies suction by a venturi device on a water faucet. Other radiologists accomplish the same thing with vacuum pumps or even by draining into a bottle or basin.

Details of the method used by the author are:

Preparation. Two ounces of castor oil the evening before examination; no supper, light breakfast and enemas night and morning. (Gianturco's regimen of preparation is similar, but he makes sure that the bowel is clean by having water enemas given until the return is clear.)

The Barium Suspension. U.S.P. barium is mixed with about six parts of water by weight. This mixture was worked out to be dense enough for fluoroscopic visualization but not so dense that it will block the x-ray beam. To the mixture is added 1 per cent tannic acid, and also two tablespoons of methylcellulose (Methocel, Dow 1400 CPS) which has been converted into a jell according to the directions on the package. With this preparation, good evacuation patterns are the rule rather than the exception.

The Examination:

1. Barium is introduced to the descending colon and the flow is then stopped. The patient is rolled up on his left side until the sigmoid colon is well seen and one or two films 10 x 12 in size, are taken with the overhead tube, using 100 kilovolts and appropriate milliamperes at a 40-inch distance.

2. The sigmoid colon and the distal portion of the descending colon are then carefully palpated and observed fluoroscopically. Usually one or two 6 x 8 spots are taken and also eight spots (four on each

of two 8 x 10 films) of this region are obtained with maximum compression. (Twelve small spots, it is to be remembered, scatter as much radiation as one 8 x 10 spot.) At this stage the suction apparatus is used to control the desired degree of filling or emptying of the area under observation. Suction makes fluoroscopy easier, good spots are more readily obtained and more of the films will be translucent, showing satisfactory intraluminal detail. If suction had no other value it would be worth while because the patient can be made comfortable; a small amount of barium removed from the distended rectum does the trick. "Accidents" are far fewer.

3. The remainder of the bowel is then examined in the usual fashion and when the barium has passed the ileocecal valve or the appendix has been identified, a spot film of the cecum is made. Some of the barium is evacuated by suction until the haustral folds are fairly definite. Anterior-posterior and posterior-anterior films are then taken, and also a 10 x 12 lateral view of the rectosigmoid region.

4. The patient then goes to the toilet. The previous siphonage seems to aid complete evacuation since there is less for the patient to get rid of. After evacuation, a 14 x 17 post-evacuation posterior-anterior, a 10 x 12 anterior-posterior oblique sigmoid, and a lateral rectosigmoid view are obtained.

5. The films are inspected while wet, and if a persistent or suspicious defect is noted, the area immediately about it is examined if time permits. In any event, double contrast studies are done about two days later in cases on which suspicious looking defects are seen and in all cases in which there is a history of bleeding that cannot be explained on the basis of hemorrhoids or other relatively innocuous lesions. As part of this double contrast study, the sigmoid colon and descending colon are again examined much as at the first examination before the barium is distributed by injecting air.

It will be noted that in the method described, considerable attention is concentrated on the distal third of the large bowel, for most of the lesions are located there. Inasmuch as the incidence of polyps of the large bowel and rectum increases greatly with age—15 per cent of patients over 50 years of age have polyps somewhere in the bowel or rectum—persons in the higher age groups are examined with great care.

DOUBLE CONTRAST STUDY

Some investigators have recommended that a double contrast study be routinely performed instead of a barium enema. This technique, developed principally by Moreton and his associates,^{6-11, 14} has merit. The author has performed double contrast studies on practically every patient in whom there was reason to suspect a lesion, and for a while dou-

ble contrast studies alone were used routinely instead of barium enema studies. In the author's experience, however, the double contrast study has proved valuable as a confirmatory method only. Frequently it will demonstrate the lesion quite well, showing it so characteristically there is no chance of mistake. Sometimes it will demonstrate a lesion that cannot be seen by another method. Often, however, only the knowledge of where the lesion is supposed to be will permit recognition of it on double contrast studies. As a matter of fact, skill in detecting a polyp on double contrast films is developed in that way. The double contrast studies moreover seem to have definite advantages in demonstrating lesions proximal to the sigmoid colon, but unfortunately that is not where most of the lesions are. It is discouraging to end up with what appears to be a flawless set of films from the technical point of view, yet have the lesion show up poorly or only once, or perhaps be demonstrated best on the spots taken just before the air is injected. There is a great waste if there is some slip in the technique—too much barium, incorrect exposure—for much time is needed to examine these films with the care that should be given to them.

The double contrast technique used by the author is that described by Jones and co-workers^{5, 13} of Stanford Medical School where "Baridol,"[®] a preparation with colloidal properties, was developed; and the material used is the so-called "gastric" Baridol, not the "colonic." Recently Barotrast,[®] a similar preparation in powder form developed by Foster, has been used. It is perhaps better generally, although it is not so good as Baridol in the upper gastrointestinal tract. Either of them is better than anything else the author knows of.

In a double contrast study the following views are taken: 14 x 17 anterior-posterior and posterior-anterior views with the tube overhead. Then the tube is shifted so that the x-ray beam will be horizontal across the table, and a right lateral and a left lateral decubitus view are taken. A standing posterior-anterior view, an oblique view of the distal colon, and a lateral view of the rectosigmoid region usually finish the examination. Spots are taken as required. The siphon is used before these films are taken, to remove excess barium from the rectum and lower bowel.

Even with the greatest of care, no one method of examination is effective every time. A technique that worked beautifully on Monday may seem worthless on Tuesday, even though on the second occasion the examiner has the advantage of knowing where to look (or so he thinks). More than once a lesion not recognized fluoroscopically has shown up on spot films; and sometimes it could not be seen even when the area was immediately examined again fluoroscopically, and then was readily seen again in

additional spot films of the area. On the other hand, some lesions would be missed if they were not first suspected on the basis of fluoroscopic observation, since the hand can palpate more deeply than the compressor, uncovering the suspicious areas better. Lesions can be suspected fluoroscopically; they have to be confirmed by films.

Other factors that probably affect the accuracy of the "opaque" barium enema examination are:

1. If water is present in the bowel at the beginning of the examination, the barium suspension becomes so thin that a polypoid shadow is completely lost in it, since the medium surrounding the polyp becomes of approximately the same density as the polyp and there is no contrast. This is one objection to using the rather thin barium suspensions some investigators have recommended. The poorer fluoroscopic visibility and evacuation patterns are also objections.

2. Should the barium settle out before films are obtained the polyp will be suspended in water above a layer of dense barium. In this situation it will not be demonstrated because it is surrounded by a medium of essentially the same density, even though the x-ray beam penetrates through the barium column.

3. There is a certain amount of air in the bowel and it will naturally rise to the top. A polyp may lie suspended in a pocket of air above the barium, the barium flowing over the lower surface of the loop in the same way that water flows over a dam. Even should the polyp be coated by barium, it may not be visible, for there may be too little contrast between it and the denser layer of barium below. For these reasons it is desirable to have both anterior-posterior and posterior-anterior films, since with these views there is a better chance of getting a polyp into a pool of barium. This applies to both the opaque barium enema and the double contrast studies. Compression is valuable because a polyp may thus be forced down into the barium on the floor of the loop. The Trendelenberg position can also be used to fill loops which otherwise are partially filled by air, and suction aids in removing excess air and fluid.

4. Sometimes the loops of the distal bowel are not fixed; the arrangement of the loops which was optimal on one day may be an unsatisfactory one the next. Sometimes a sigmoid colon which was noted to loop immediately to the left may, on re-examination, form a small loop to the right before crossing back to join the descending colon. This shift in the position of the loops should be kept in mind when trying to confirm a lesion by double contrast studies. Even the very care with which a patient is reexamined may defeat the purpose, for the bowel is not distended quite so completely on this occasion, and therefore the loops may not rise out of the pelvis to the same degree.

Despite these pitfalls the barium enema made translucent by high kilovoltage and spot films is still the best method for examining the colon for the first time. The double contrast study, on the other hand, is very tricky from the technical point of view. If it is relied on exclusively, polyps and other lesions will be missed. It is a fine examination and certainly should be used often—but after the preliminary barium enema, regardless of what kind of lesion is being looked for.

Most important of all is the principle, "Seek and ye shall find."

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As the Anesthesiologist Sees the Sunset

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NOWADAYS ELDERLY PERSONS are seen in increasingly large numbers in surgical practice. This has resulted from the increased life span that has come about in the past half century. The number of people in this country 65 years of age or older has already exceeded twelve million and with each year there is a further increase.

Surgical treatment has always presented greater hazards for persons in the sunset years of life but the hazards are much less today than a generation ago. Although the training and skill of ordinary surgeons today is better than the training and skill of the outstanding surgeons of a generation ago, it would seem that the reduction of mortality is not alone due to increased technical skills. The improvement in mortality rates for elderly persons following operations has not been so much in the reduction of death in the operating room as in the postoperative critical and convalescent periods.

The lowering of the hazards of surgical intervention for elderly patients has resulted from many factors. Innovation of surgical and anesthetic techniques has played a role but the principal benefit of these improvements so far as patients are concerned is that they permit more adventurous surgical procedures. Early ambulation also has been helpful. However, the major factors in decreasing the hazards of operation have come and are continuing to come from the research laboratories—first in the form of products with specific medicinal properties and second, but much more important, in the form of information of the many complex physiological processes in health and disease. This latter factor is the key that opens the door to another day for many elderly patients.

In obtaining perspective of the elderly patient, chronological age is unimportant compared with an estimation of physiological age. The degree to which degenerative changes and the scars of previous or continuing disease processes have replaced functioning cells in the organs and tissues of the body is an infinitely greater index of the risk of a surgical procedure than mere age in terms of years. Some of the changes in cellular structure resulting from disease or degeneration are relatively unimportant with regard to risk to the patient during anesthesia and operation, whereas others are of paramount impor-

• *Age need no longer be a barrier to operation in view of the expanding knowledge of the care of surgical patients. Blood volumes and blood components can be maintained with replacement therapy. Nutritional and vitamin requirements are better understood and carbohydrates, proteins and vitamins must be given in sufficient quantities to prevent further debilitation during the critical period following operation.*

It has been suggested that the usual pharmacological effects of drugs may not be applicable to elderly patients. The choice of anesthetic agent based on pharmacological effects on younger persons does not necessarily apply to the aged.

tance, such as those in the cardiovascular system, the respiratory system, the kidneys and the liver.

The cardiovascular system must be singled out primarily as the interchange system of the body. It is the highway that provides the cells with oxygen, without which such organs as the brain, the heart, the kidneys and the liver cease to function; that carries the protein building-blocks and the sugars for the anabolic functions of the cell; that distributes the hormonal components that control cellular activity; that has available the components for the clotting mechanism; and that carries salts so necessary for cellular function.

Disease and degenerative processes may so affect the cardiovascular system that its compensatory mechanisms are weakened. But this does not mean that the patient is to be denied the benefits of surgical treatment. It does mean, however, that the patient with a history of myocardial infarction must have adequate pulmonary ventilation and circulation not only during the operative procedure but also during the convalescent period. It means also that hypertensive patients must be kept in a hypertensive state since a lowering of blood pressure may lead to thrombosis and/or embolism, while a sudden increase in blood pressure may result in a cerebrovascular accident. And it does mean the avoidance of prolonged hypotensive states since the decreased flow of blood deprives such organs as the brain, heart, kidney and liver of an adequate supply of oxygen. Such hypoxia may result in coma, hemi-

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plegia or depression of such vital centers as the respiratory and cardiac centers in the brain, or in cardiac arrhythmia or cardiac failure, or in cessation of function of the kidneys with the resultant piling up of catabolic products in the bloodstream and the loss of the regulatory mechanisms controlling the concentrations of anions and cations in the circulation, or the inhibition of detoxification processes in the liver.

Degenerative processes in the respiratory system are chiefly fibrotic in nature, accompanied by loss of elastic tissue; and very frequently there is some degree of atrophic emphysema. The patient is a respiratory cripple to the degree that those changes are present. The advantages of an oxygen-enriched atmosphere for these patients is obvious, but even more important is the need for adequate ventilation to permit normal gaseous exchange at the alveolar level.

Degenerative changes or the scars of previous disease may leave the kidneys and liver with impairment of function. In these circumstances it is necessary to maintain homeostatic conditions during operation and convalescence, particularly with regard to oxygenation and adequate circulation.

The maintenance of homeostatic conditions in the vascular system necessitates some understanding of water and electrolyte distribution in the body. Water balance in the body represents a balance between intake and output. The kidneys are the main organs concerned with output of water and under normal conditions the kidneys can successfully keep the vascular system within normal or tolerable limits even though there is a large intake of water. However, in the presence of pathological changes such as occur with hypertensive arteriosclerosis, the ability of the kidneys to handle a large intake of water may be impaired and result in edema. Many other disease processes, of course, may produce edema and in each case the edema is the result of lowered osmotic pressure of the circulating plasma accompanied by a decrease in plasma protein. The effect of the diminished osmotic pressure is to reduce the transfer of water from the interstitial spaces to the vascular system, and the effect of the reduced plasma protein is to cause the kidneys to retain water and salts. A vicious circle is instituted.

Water deprivation, on the other hand, is immediately compensated by withdrawal of water from the interstitial spaces. With continuing loss of water from lungs, skin, intestines and kidneys during water deprivation, there is also loss of water from within the cells. The cells respond to this by catabolic processes on the fats, carbohydrates and proteins which break down into water and acid metabolites. The hypovolemia so produced delays the excretory functions of the kidney and the acid metabo-

lites build up in the vascular system as an increase in non-protein nitrogen. Peripheral vascular collapse results from profound hypovolemia.

Complicating the changes in water balance are the changes in electrolytes that are contained in the various water compartments of the body. Sodium is chiefly concerned in the plasma and interstitial compartments, whereas in the cells potassium is the main cation. To a large extent the concentration of sodium determines water balance, since the kidneys try to maintain a normal sodium concentration by excreting or retaining the material. A rise in the sodium concentration stimulates the secretion of antidiuretic substances by the pituitary gland, which stimulates the kidneys to reabsorb water and thus lower the sodium concentration. A fall in sodium concentration stimulates the secretion of steroids from the adrenals, which brings about a reabsorption of sodium by the kidneys to raise the sodium concentration of the blood.

Although potassium is the chief cation of the intracellular space, potassium is also present in low concentration in the plasma and interstitial space. Potassium, unlike sodium, is not adequately retained within the body. As a result, during fasting, vomiting, diarrhea or prolonged gastric suction, the potassium level tends to fall. The signs of hypopotassemia are chiefly cardiac, and characteristic changes in the electrocardiogram take place as degenerative changes proceed in the myocardium. The correction of potassium deficiency must be brought about slowly, for a sudden increase in the potassium concentration in the plasma above a critical point may induce cardiac arrest.

The problems of water and electrolyte balance in elderly patients must be evaluated in terms of the patient's physiological age and whatever pathologic condition is present. Intake of fluid from all sources should not exceed the output by all avenues. Particular consideration must be given to patients with known cardiac disease to prevent overloading of the myocardium by excessive fluid. Special attention must be given also to patients with kidneys that do not concentrate urine and who therefore need proportionately larger volume of fluids to get rid of metabolites. The salt intake is best restricted, except in cases of definite loss, to about 5 gm. of sodium chloride a day to prevent excessive rise in sodium and chloride levels. In addition, sodium and potassium levels are reciprocal and high sodium intake will tend to produce hypopotassemia.

The nutritional aspects of surgical intervention must be recognized, and in elderly persons close attention to nutritional needs is particularly rewarding.

Hypoproteinemia is a major enemy of elderly patients following surgical operation. The loss of

protein may be considerable, resulting from atrophy of disuse, from toxic destruction of protein, from loss by hemorrhage and from protein catabolism to meet caloric needs.

In the preparation of a patient for operation and in the management of him in the postoperative period, it is mandatory that the intake of nitrogen equal or exceed the nitrogen loss. Such a positive nitrogen balance will yield benefits such as better wound healing and decreased incidence of wound dehiscence, greater motility of the gastrointestinal tract, avoidance of edema, greater cardiovascular stability and improved liver function.

The maintenance of a positive nitrogen balance is best accomplished by oral feedings. Where such therapy is contraindicated, parenteral administration must be used. The best substances for parenteral use for this purpose are whole blood, plasma and serum albumin. However, proteins for parenteral administration are also available for maintenance of a positive nitrogen balance.

The carbohydrate intake serves a useful purpose for the patient in supplying basal caloric requirements, but, much more important, carbohydrates protect the patient's protein reserves from catabolic activities. The administration of 100 gm. of carbohydrate in conjunction with parenteral proteins may provide a positive nitrogen balance.

Vitamins are important nutritional aids. Vitamins B and C are rapidly used up by the body. The components of the vitamin B complex are required in large amounts to utilize parenteral glucose. Also, the detoxifying functions of the liver are dependent on vitamins. If there is a deficiency of vitamins, body protein is catabolized to provide the liver with these detoxifying catalysts. In the absence of vitamins, so much protein is destroyed that it is impossible to maintain a positive nitrogen balance.

In the use of anesthetic and analgesic agents on elderly patients, constant vigil must be kept against overdosage. The depression from such overdosage in a patient with cardiovascular disease can impair the functions of the cardiovascular system, particularly in the supply of oxygen to vital centers and organs. Since the heart is one of these vital organs, a vicious circle of further depression of cardiac activity can quickly be started. For patients who are "cardiovascular cripples," hemodynamic stability and abundant oxygen are imperative.

The differing effects of drugs on patients of differ-

ent physiological age has never received much attention. Yet it is known that the depressant properties of some narcotics are greater in the very young and the aged. Also, it is common knowledge that scopolamine, while possessing a euphoric property for patients in the 20 to 60 age group, may in equivalent doses produce extreme excitement in persons of greater age. In a recent study¹ on the effectiveness of Dramamine in controlling postoperative nausea and vomiting, a difference of effectiveness related to the age of the subject was noted. In patients under 60 years of age, Dramamine reduced the incidence of postoperative nausea and vomiting by about 27 per cent as compared with a control group. But in patients over 60 years of age there was a reversal of effect; the incidence of nausea and vomiting was greater in patients given Dramamine than in the control series.

Ether has long been considered a safe anesthetic agent since very little disturbance of cardiovascular dynamics or of liver and renal function has been observed in connection with its use. However, recent research by Brewster and co-workers² showed ether to be a direct depressant of the myocardium in animals, and it was observed that the beneficial effect of ether on the cardiovascular system is due to the sympathomimetic effect of the drug—direct stimulation of sympathetic nerve endings and the adrenal medulla.

In elderly persons the aging process or disease may produce atrophy or depression of the adrenal or pituitary glands, and in such circumstances ether would act only as a myocardial depressant with perhaps fatal results. In the light of these observations, smugness or complacency about the use of ether as the anesthetic of choice in elderly persons is unwarranted. It is possible that other drugs may possess inherent dangers for elderly patients due to differing pharmacological effect with age. If such pharmacological eccentricities exist, it will be up to anesthesiologists as pharmacological clinicians to prove it.

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Atypical Laryngeal Lesions

Problems in Diagnosis

IT IS FORTUNATE both for patients and physicians that hoarseness is so often the initial symptom of laryngeal disease, and fortunate too that it is usually evident during the early stages of the disease. The hoarseness may be due to any number of affections such as acute infection, benign lesions, malignant growths, paralysis, granulomas and trauma. Competent laryngologists have little difficulty in differentiating and diagnosing the majority of these lesions by the usual methods of laryngeal examination. In a small percentage of cases, however, diagnostic problems are posed. These cases present an atypical appearance which is due in most instances to situation of the lesion entirely or in part below the mucosa. In such circumstances the distortion of the larynx produced by the disease, as observed upon routine examination, is confusing and often misleading with regard to the true nature of the condition. Carcinomas and cysts make up the majority of lesions of this kind. Such atypical laryngeal pathologic conditions demand a high degree of diagnostic acumen and the intelligent use of all diagnostic aids and methods available.

There are three diagnostic aids which have been found to be of particular value in the diagnosis of atypical forms of laryngeal lesions: (1) X-ray, or, more specifically, tomography; (2) aspiration; (3) thyrotomy.

Tomography has been proved to be a useful adjunct in the study of diseases of the larynx. Its usefulness is often not fully appreciated. Since facilities for the procedure are now available outside the teaching institutions and research laboratories, physicians generally might well acquaint themselves with the technique, understand the fundamentals and have some concrete idea as to what information may be obtained from its use.

Figure 1 (*left*) is a tomogram of a normal larynx in phonation. The air columns of the trachea, ventricles and hypopharynx can be readily identified. The true cords are seen in approximation with the false cords above. Figure 1 (*center*) presents pronounced thickening of the right true cord with obliteration of the normal right ventricle. Clinically this was a case of carcinoma involving the right true

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• A small percentage of cases of laryngeal disease may present an atypical appearance on the routine methods of laryngeal examination. The atypical appearance is usually due to situation of the lesion in whole or in part beneath an intact mucosa. All available methods of diagnosis should be used in these cases in an attempt to establish the correct diagnosis and to formulate a plan for treatment. Tomography, aspiration and exploratory thyrotomy are of value in such cases.

cord with extension into the right ventricle. Figure 1 (*right*) shows pronounced edema of all laryngeal structures with a loss of detail and a large subglottic mass on the left side. This was from a case of carcinoma following extensive irradiation with edema of the glottis. The subglottic mass on the left represents a subglottic extension of the carcinoma.

The value of tomography is further emphasized in the following case:*

CASE 1. A 58-year-old physician had a history of intermittent hoarseness of seven weeks and of complete aphonia for a week before examination. Upon indirect laryngoscopic examination pronounced fullness of the left side of the larynx was noted. This distortion involved the entire left false cord, left ventricle and left aryepiglottic fold with a resultant limitation of motion of the left true cord. On the basis of a strong clinical impression that the conditions observed were owing to a submucosal cyst, aspiration by indirect laryngoscopy was done at the initial examination. Approximately 4 cc. of turbid thick material was aspirated. Tomograms revealed the true nature of the lesion. Figure 2 shows the large submucosal cyst filling the entire left half of the larynx. This cyst in its entirety was excised endoscopically, using the Lynch suspension technique.

The second aid in diagnosis—aspiration—was used to an advantage in the foregoing case. In ordinary circumstances, this is done endoscopically and may be done by direct or indirect laryngoscopy. The aspirated material may be cultured, examined on direct smear or subjected to cytologic study. Occasionally valuable information may be obtained from the material removed on aspiration.

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*From the records of Lewis F. Morrison, M.D., who consented to presentation of the case here.



Figure 1.—*Left*, tomogram of normal larynx in phonation; *center*, tomogram of larynx showing a thick right true cord and obliteration of the right ventricular air space. Clinically diagnosed as carcinoma; *right*, tomogram of a larynx following irradiation for extensive carcinoma. There is edema with a loss of detail and a subglottic mass on the left side.

The third aid in the diagnosis of atypical laryngeal lesions is the judicious use of thyrotomy as an exploratory diagnostic procedure. It is an accepted fact that laryngeal cancer in its various forms cannot be diagnosed by clinical impression alone. Histological examination of the diseased tissue is the only way in which the diagnosis is certain. Even then, it must be ascertained that the tissue examined microscopically is representative of the disease. Sometimes it is not, either because the biopsy specimen was not removed from the diseased tissue or because the pathologist did not obtain a slide in the proper plane to demonstrate the disease. In a recent statistical analysis it was noted that in 14 per cent of the proved cases of laryngeal cancer in a series of 260 the first biopsy was negative for the disease. Although cancer cannot be diagnosed by clinical impression alone, proper weight should be given to it. If the clinical appearance or behavior of a lesion suggests malignancy, it is the responsibility of the laryngologist to prove conclusively that it is not—if it is not. One "negative" biopsy, or occasionally three or four, may not do this. Therefore, it is felt that thyrotomy with exploration and direct biopsy is indicated in the occasional case in which carcinoma is strongly suspected clinically and has not been proved by the usual methods. Thyrotomy is recommended under the following conditions: (1) A conscientious effort must have been made to obtain a positive biopsy endoscopically. (2) An adequate pathological sectioning in all planes of the tissue removed endoscopically must have been assured. (3) A consultation with another laryngologist must have confirmed the clinical impression. Finally, preparations must have been made to pro-



Figure 2 (Case 1).—Tomogram of larynx showing a large submucosal cyst involving the left side of the larynx and hypopharynx.

ceed instantly with the definitive treatment if examination of frozen sections substantiates the clinical diagnosis. The following two cases demonstrate the use of thyrotomy as a diagnostic procedure.

CASE 2. A 48-year-old man was admitted to hospital with progressive hoarseness of two months' duration. Indirect laryngoscopy on admission revealed generalized engorgement of the vessels of the larynx, with a fullness of the left false cord making visualization of the true cord impossible. The impression was that the patient had chronic laryngitis and he was treated accordingly. Improvement was slight. After ten days the larynx was examined directly and a biopsy specimen was taken from the region of the left ventricle and the left false cord. A report of chronic inflammation was returned. Direct laryngoscopy was carried out again six weeks later and again two months after the initial examination. The fullness of the left false cord and the ventricle persisted but no ulcer or proliferative growth was noted. Biopsy specimens taken from tissues as deep as the instruments permitted were negative on both occasions. Papanicolaou preparations of aspirated contents were negative.

Two and one-half months after the initial examination a node appeared in the left side of the neck which, on removal, showed metastatic squamous cell carcinoma. A search for the primary lesion included other areas such as the nasopharynx, sinuses and chest. These were all normal. Almost three months after the first examination thyrotomy was performed and a large submucosal squamous cell carcinoma was demonstrated and proved by frozen section. At the same sitting, total laryngectomy and a left radical neck dissection were done. Figure 3 shows the larynx with the carcinoma opened. Two years later there was recurrence on the right side of the pharynx and on the base of the tongue. This lesion was excised and radical neck dissection on the right side was performed. The patient died four years after the original operation of a traumatic cerebrovascular accident. Cancer was not observed at autopsy.

This case illustrated four important points.

1. The diagnosis of a primary submucosal squamous cell carcinoma of the larynx can be difficult. For two and a half months cancer was suspected, but the decision for thyrotomy was delayed until after the metastatic node appeared in the neck. No doubt, valuable time could have been saved if thyrotomy had been done two months earlier. In this particular case, the delay of two and a half months was not catastrophic, but in some cases it might well be.

2. The value of the thyrotomy with exploration and frozen section was demonstrated. Three negative biopsies were obtained before it was decided to open the larynx.

3. Experience has shown that for primary submucosal carcinoma extensive operation is necessary. There is a tendency to underestimate the size and extent of such a submucosal lesion. Metastasis to regional lymph nodes appear early. In this case laryngectomy and bilateral neck dissections were necessary for cure. The laryngectomy and the left neck



Figure 3 (Case 2).—Operative specimen showing area of exploratory thyrotomy and submucosal carcinoma on left.



Figure 4 (Case 3).—Operative specimen one week after laryngofissure. Operative site and opened submucosal carcinoma are shown.

dissection was not done *en bloc*. It is now acknowledged that *en bloc* operation offers decided advantages.

4. Thyrotomy as a diagnostic procedure must always be followed by definitive operation at the

same sitting. The diagnosis must be proved by frozen section and the necessary operation performed at the same time, as was done in the case cited. A delay of even a week between the two procedures may be disastrous. Such a delay occurred in the following case.

CASE 3. The patient, a 57-year-old man, had had hoarseness for a year. Indirect laryngoscopy revealed a bulging left false cord and ventricle which obscured the true cord from vision. The report on a biopsy performed elsewhere was "squamous cell carcinoma." Direct laryngoscopy and repeated biopsy did not demonstrate cancer. Because of the previous positive biopsy and because of experience with a previous case (Case 2 reported herein) thyrotomy was done immediately. A submucosal carcinoma embracing the true cord and extending into the ventricle was observed. Frozen section examination substantiated the diagnosis. The lesion was resected by the laryngofissure technique. The pathologist's examination showed that the margin of resection was not adequate and a week later total laryngectomy was performed. Figure 4 shows the operative specimen with the surgical defect from the laryngofissure. Two years later metastatic nodes de-

veloped in the left side of the neck. A left radical neck dissection was done and the immediate result was satisfactory. One year later, however, the patient died as a result of extensive metastasis in the mediastinal lymph nodes and lungs.

It is entirely possible that the first biopsy taken in the above case, which was reportedly positive, contained the entire part of the cancer that extended to the mucosal surface. It is always good policy to insist on one's own biopsy, or at least the opportunity to review the pathological sections of biopsy elsewhere. Refusal to accept a written report should not be interpreted as being distrustful or discourteous. The tendency of submucosal carcinoma to be deceiving in its extent is illustrated in the foregoing case. It was so deceiving that resection so inadequate as laryngofissure was carried out. It is now a widely accepted fact that laryngectomy followed at a later date by a neck dissection for metastatic spread produces poor results.

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Congenital Diaphragmatic Hernia

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ANY PHYSICIAN dealing with infants and children, whether he be obstetrician, pediatrician, general practitioner or surgeon, should be cognizant of congenital diaphragmatic hernia. The condition should be kept in mind as a possible cause of a bizarre variety of symptoms and one which needs prompt correction. For surgeons, who usually see the patient after the diagnosis is made, certain technical aspects of handling the baby are of particular importance.

Congenital diaphragmatic hernias arise as a result of incomplete fusion of the segments of the diaphragm. Early in the development of the embryo, there is free communication between the thoracic and abdominal cavity. The diaphragm develops from a ventral and a dorsal aspect. The ventral portion originates from the septum transversum, arising originally in the neck at the level of the third cervical vertebra from the third and fourth cervical myotomes, and migrates caudad, taking with it its nerve supply. A dorsal portion develops from the dorso-lateral abdominal wall and grows to meet the ventral portion. Separation of the two cavities is completed by about the third month of intrauterine life. The last to fuse is a posterior-lateral area called the foramen of Bochdalek. It is bridged across first with a pleura and peritoneal membrane between which muscle fibers later migrate, forming a solid closure. If development stops before this membrane is formed, an opening remains and there is no hernial sac present. If development proceeds through the formation of the membrane, any viscera in the thorax will be covered by a hernial sac.

Another potential area of herniation is that on either side of the sternum where the foramen of Morgagni may form if the costal and sternal fibers of the developing diaphragm fail to fuse. The other weak spot is that of the esophageal hiatus where either the diaphragm may fail to develop or the stomach may fail to completely descend. In the latter two sites the congenital hernia usually has a peritoneal sac.

The most important factor in diagnosing congenital diaphragmatic hernias is to consider such a condition in differential diagnosis. The cardinal signs of cyanosis, dyspnea or vomiting occurring in an infant should immediately arouse suspicions of this condition. However, as was pointed out by Dono-

• Treatment of congenital diaphragmatic hernia in infants is a matter of semi-emergency and should be done as soon as adequate preparations can be made because sometimes fatal complications develop swiftly. In preoperative preparation there is great advantage in thorough decompression of the abdominal viscera, stomach, bowel and bladder. As to operation, the author believes the abdominal approach has most to recommend it. In the postoperative period, continued gastric suction for a brief time, parenteral administration of fluids and use of a Mistogen tent with a high moist oxygen content will facilitate rapid recovery.

van,³ any perplexing upper abdominal, respiratory or cardiac symptoms should bring this possibility into consideration, for the symptoms vary to so pronounced a degree. They may result from either interference with function of the herniated viscera or from pressure on the heart or lungs. The latter may be very acute and suddenly fatal. The reported symptoms include failure to gain weight, cough, difficulty in breathing and signs of intestinal obstruction. (In the case herein reported, the first unusual thing the parents of the patient noticed was that the abdomen "seemed to beat like a heart," owing to a very rapid respiratory rate and depression of the abdomen with each inspiration.)

The diagnosis can usually be made by clinical examination. As is so often the case, just looking at the patient turns suspicion toward the diagnosis, which then leads to search for less obvious confirmatory signs. One who is used to examining babies is struck by the small abdomen with contours like those of an adult instead of the round protuberant abdomen of the usual baby. Also commonly noted is the rapid respiratory rate owing to the small volume of tidal air. The confirmatory signs consist of evidence of shift of the heart, diminished or absent breath sounds and unusually plain peristaltic sounds on one side of the chest.

An x-ray film of the chest will confirm the diagnosis and a lateral view may aid in showing where the defect is. (On initial examination of the x-ray films of the patient in the case here reported, it appeared that most of the left diaphragm was gone and a swallow of barium was given to confirm or

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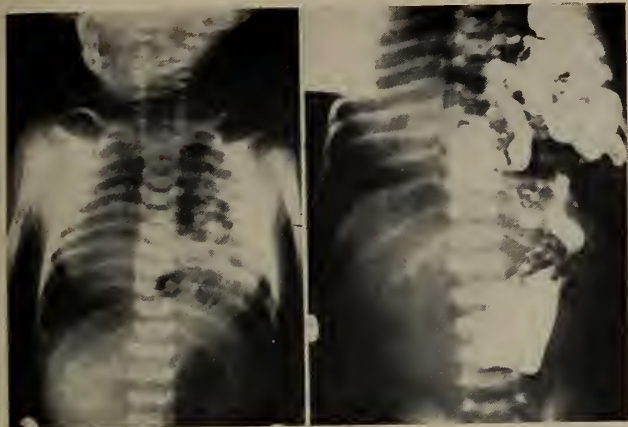


Figure 1.—(Left) Shift of mediastinum to right and intestines in left thoracic cavity. (Right) After oral administration of barium.

disprove this impression so that the condition could be prepared for at the time of operation.)

REPORT OF A CASE

A four-week-old boy was taken to a physician because of his mother's observation that "his abdomen beat like his heart." Delivery had been normal and the baby had had no apparent difficulty during the first few weeks of life.

Fluoroscopy was done as part of a routine examination and abnormalities were seen in the left lung field. The diagnosis was made by roentgen evidence (Figure 1). The baby was referred to the author and, as he was not in distress, a more complete study before proceeding with surgical repair was decided upon. In an upper gastrointestinal tract series extensive migration of the stomach and the small and large bowel into the left thoracic cavity were observed (Figure 1). The films also gave a good idea of the defect. The baby was scheduled for operation, but before he was admitted the mother telephoned on two occasions to say that the baby had momentary choking spells after eating. One night she telephoned frantically that the baby was choking and bluish. Even as she was talking, the physician who had examined the baby in the first place, who had been summoned, arrived and relieved the child by aspirating the stomach. The baby was then brought into the hospital where examination showed an apparently normal baby, except that the abdomen was flat rather than protuberant. The left side of the chest was dull to percussion, and over it peristalsis was plainly audible. The stomach tube was left in place and suction was applied to it while the patient was being prepared for operation.

Under intratracheal anesthesia the abdomen was opened through a left paramedian incision. The stomach doubled back on itself and entered a defect in the left posterolateral portion of the diaphragm with a portion of the stomach, small bowel and part of the large bowel up in the left side of the chest. A catheter was slipped through the defect into the chest to permit air to enter and break the suction, and the bowel was reduced onto the abdominal wall. This gave an unobstructed view of the defect in the

diaphragm lying directly beneath the upper portion of the incision. The defect was about $5 \times 3\frac{1}{2}$ cm. with smooth edges and no hernial sac. At first there appeared to be no posterior diaphragm at this point to use for repair, but a little dissection behind the diaphragm freed a quite adequate layer of muscle which had lain against the posterior wall. The smooth margins of the defect were freshened and a closure was done with mattress sutures. As the last suture was placed, a catheter was again passed through the remaining space. When the anesthetist had inflated the left lung thoroughly, the catheter was removed and the last suture tied. As the intestines were being put back into the abdominal cavity, a mass was noted which occupied about half the space in the pelvis. It was merely the bladder filled with urine. At the end of the operation a catheter was inserted into the bladder and although only one ounce of urine was released, that small volume took up a large proportion of the available space in the tiny abdomen.

Immediately after operation there were breath sounds of good quality over the left lung field and only slight abnormality of percussion note. The left lung was adequately expanded and as there was little pneumothorax aspiration was not done on that side of the chest. Gastric suction was continued for 12 hours and the postoperative course was smooth until the twelfth postoperative day when a strangulated right inguinal hernia had to be repaired.

Preparation for operation should be started as soon as a diagnosis is made. The situation is one of emergency and not of elective operation. Seventy-five per cent of babies treated expectantly die within the first month.⁸ Except for, possibly, premature infants, no baby is too young for operation. It was Dr. Ovar Swenson who said, relative to surgical procedure, "A baby is like my new car—it will never be in better condition."

Besides the usual routine preparation of replacing fluid and electrolytes, another important step is to prepare the viscera by making them as empty as possible. The experience in the case herein reported, in which one ounce of urine took up so much space in the baby's underdeveloped abdomen, prompted investigation of the possibility of further reducing the visceral volume to facilitate closure in cases of that kind, as well as patients with omphalocele. For this purpose, newborn babies were weighed at birth and again after the first passage of a stool. The amount of stool and urine passed by 7-pound babies was $2\frac{1}{2}$ to $3\frac{1}{2}$ ounces—a relatively large volume in a small baby with an abdomen not developed to contain all the intestines. Hence, use of three catheters in preparation for operation is recommended: Gastric suction, a urethral catheter, and a rectal tube to evacuate the lower bowel by enema if something simple like a suppository has not brought about preoperative bowel movement.

Of first consideration in operative procedure is

anesthesia. Provision should be made for positive pressure anesthesia either by intratracheal tube or face mask so that respirations can be maintained while the chest is opened and the lung can be expanded at the close of operation. The anesthetic agent should contain a high oxygen concentration, for there may be only a small amount of functioning lung tissue initially.

As to surgical approach, the author recommends the paramedian or rectus incision. The advantages are numerous. The opening is directly over the defect, providing very good exposure. All the intestines can be reduced outside the abdominal cavity so that there is no interference with the operative field. The viscera reduce readily for they are not adherent within the thoracic cavity but are lying loose, as they do in the abdomen of a normal child. With the abdomen opened any defect in rotation of the bowel, a not uncommon associated abnormality,⁶ can be dealt with at the same time. Finally, the abdominal approach permits use of two-stage closure of the abdominal wall in difficult cases: undermining the skin and closing only the outer layer, then in five or six days, when the abdominal wall has stretched, doing a layered closure.⁵

An alternate approach is through the chest,^{10, 11} suggested by its proponents as quicker in emergencies. With this view the author cannot agree. It is also more difficult to close a diaphragmatic defect from above owing to the interference of intestines in the tight abdomen.

The author also takes exception to investigators who advocate phrenic crush.^{6, 11} The advantages are said to be that it makes it easier to close the opening with a quiet diaphragm on which to work; a relaxed diaphragm supposedly gives more room in the abdominal cavity, and there is less pull on the suture, so healing is promoted. On the contrary, there is little difficulty in suturing a moving diaphragm. Moreover, if the surgeon desires it, a skilled anesthesiologist can control respirations by controlling the carbon dioxide content of inspired gas. Also, frequently in operations on adults the innervated and active diaphragm is sutured and it heals readily. Finally, it may be wondered if the respiratory distress mentioned as resulting from increased intra-abdominal pressure is not sometimes the result of a paralyzed diaphragm rather than of a tight abdominal wall. All these considerations, plus consideration of the sometimes large amounts of mucus in babies' throats, seem to weigh heavily against phrenic crush.

Reduction of the herniated viscera should be orderly; the bowel should be withdrawn first, then the spleen or liver if involved. Reduction is facilitated by permitting air to enter the pleural cavity either by means of a catheter inserted through the defect or by use of a retractor. One should not hesitate to split

the diaphragm further, if that is indicated, to withdraw the spleen or liver. Adhesions are reported as rarely encountered.

Closing the defect of a posterior lateral hernia consists of freshening the edges and approximating them with a single or double row of interrupted figure 8 sutures. In the case of herniation through the foramen of Morgagni or the dome of the diaphragm, after the sac is reduced a similar closure is done. In all these areas the spleen or liver helps to buttress the suture line. It is well to keep in mind also that the diaphragm runs parallel to the posterior abdominal wall for a considerable distance; in fact, since some of its fibers arise as low as the fourth lumbar vertebra, additional diaphragm can be freed for bridging the defect by dissecting this portion from the posterior and lateral wall. Rectus fascia, renal fascia or fascia lata are sometimes used to bridge large defects, and still another method is to partially collapse the lower thoracic cage by sectioning or removing sections of the ribs on the involved side.

The lung is expanded by the anesthesiologist just before the diaphragm is closed. At the conclusion of the operation a check is made for persistent pneumothorax and, if necessary, air is aspirated through a needle. Sometimes the lung does not expand immediately, but surgeons who have operated through the chest have reported cases in which a carnified lung that did not expand at the time of operation appeared normal by x-ray 24 to 48 hours later.

Postoperative care consists of supportive treatment. The author uses Mistogen tent with high humidity and oxygen content, parenteral fluids, transfusion of whole blood when indicated, and gastric suction until the baby retains feedings.

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Relation of Nutrition to Health in Aging Persons

A Four-Year Follow-up of a Study in San Mateo County

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DURING THE SUMMER and fall of 1948 and the early part of 1949, a study of the nutritional status of 577 citizens, over 50 years of age, in San Mateo County was conducted with the cooperation of the U. S. Bureau of Human Nutrition and Home Economics, the U. S. Public Health Service, the Department of Home Economics of the College of Agriculture of the University of California, the California State Health Department and the Department of Public Health and Welfare of San Mateo County. A preliminary report of this study was published in February 1951.¹

Subsequent papers on the nutritional data obtained from the study have been published by Gillum and Morgan² and co-workers at the University of California.

The 1948-49 survey in San Mateo County was probably the largest cross-section study of the nutritional status of aged people made to that date. It was the consensus of the persons involved in the study that "longitudinal studies," or repeated examinations of the same subjects, might offer more useful information than the continued observance of new subjects. Funds became available in the spring of 1952 and it was decided to re-survey as many of the original subjects as possible during the summer and fall of 1952.

The same general fields (but somewhat simplified) were included in the second survey. Several items included in the physical examination, found to be of no significance in the original study, were deleted in the second study. It was the opinion of the nutrition experts who worked on the project that as much data could be obtained from the subject's recollection of what he had eaten on a specific day as from a seven-day recorded diet. Therefore, this method was adopted for the 1952 study. In the original study, 14 blood chemical determinations, roentgen study of the chest and a bone-density determination were carried out. In the current study, this bank of tests was reduced to six—determination of the content of hemoglobin, ascorbic acid, vitamin A, carotene, cholesterol and sugar in the blood. The chest

• A follow-up study of 577 San Mateo County residents over 50 years of age who were originally studied in 1948 was carried out. Three hundred fifty still were available for reevaluation. Mortality studies showed a higher death rate in males than in females, in persons of the lower economic levels, and in those with systolic blood pressure of more than 180 mm. of mercury. Correlations between factors studied and morbidity were not conclusive, but suggested relationships between low economic status and digestive system disease; low hemoglobin and high incidence of respiratory disease; high caloric intake and digestive system disease; low thiamine intake and nervous system disease; low ascorbic acid intake and diseases of the circulatory and digestive systems.

x-ray and the bone density determination were not repeated.*

After intensive follow-up procedures, it was determined that there was a potential of 350 of the original subjects examined in 1948 available for interview and examination in 1952. The remaining 225 of the original 577 were unavailable for the follow-up reasons:

Dead (as of September 1, 1952).....	49
Not interested, refused.....	55
Too ill to cooperate.....	13
Moved out of county.....	72
Out of county temporarily.....	15
Uncontacted, all leads exhausted.....	21
	<hr/> 225

Of the 350 possible candidates for reexamination, 306 actually completed the full schedule including the physical examination, the nutritional history and the laboratory work.

Upon review of local and state records notices of the death of 49 of the original 577 participants were found. Analysis of data concerning the persons who died is given in Tables 1 through 6.

¹Presented before a Joint Meeting of the Section on Public Health and General Practice at the 83rd Annual Session of the California Medical Association, Los Angeles, May 9-13, 1954.

*Mr. Richard Handschin, a fourth-year medical student, and the public health nurses of the San Mateo County Health Department were responsible for the follow-up. Dr. Warren Hall did the clinical evaluations, and two nutritionists and a laboratory technician, employed by the University of California, did the diet evaluations and the laboratory determinations.

Although the numbers are small, there is a statistically significant difference between the percentage of deaths in the males and in the females and, as would be expected, in the older age groups as compared with the younger age groups (Table 1).

Age-specific death rates by six general classifications of cause of deaths were prepared (Table 2). By applying the age-specific death rates for the county as a whole to the study group for the four-year period, it was found that the number of deaths in the study group was somewhat less than the expected number of deaths in the group, if the experience for the age groups of the whole county had applied.

The original subjects, when selected in 1948, were all healthy—at least they had no symptoms and were not under medical care. It would be reasonable to expect that in such a group the number of deaths would be less (it was 49) than in the general population (it would have been 73 in the study group if the total county experience had been applied).

The causes of deaths in the 49 subjects are shown in Table 3.

Deaths by economic status were analyzed for the

TABLE 1.—Deaths by age and sex—September 1, 1948 to September 1, 1952; 577 subjects, San Mateo County

Age group	No. in group	Deaths		Deaths, males		Deaths, females	
		No.	Pct.	No.	Pct.	No.	Pct.
50-59.....	192	3	1.6	3	12.9	....	0.0
60-69.....	214	14	6.5	10	14.4	4	3.5
70 and over	170	32	18.8	23	25.4	9	11.4
Not stated..	1	....	.....	....	.....	0	0.0
Total	577	49	8.5	36	12.9	13	4.4

TABLE 2.—Deaths in study group in four years by age groups compared with expected deaths using total county experience

Age groups	No. in group	Deaths		—Total county experience— Predicted deaths	
		No.	Pct.	Age specific death rate	in study group
50-59.....	192	3	1.6	11.51	8 4.2
60-69.....	214	14	6.5	23.61	19 8.8
70 and over	170	32	18.8	77.90	46 27.0
Not stated..	1	0	.....	.....	....
Total	577	49	8.5	.....	73 12.6

TABLE 3.—Causes of deaths analyzed by groups and by sex for 577 subjects—1948 to 1952, San Mateo County

				Total deaths from same cause in population over 50 years of age, percent		
Cause of death		Male	Female	Total	Percent from each cause	
(400-468*)	Heart and circulatory.....	20	5	25	51.0	56.7
(330-398)	Central nervous system and circulatory.....	3	5	8	16.3	11.1
(140-205)	Neoplasms	6	1	7	14.3	15.5
(470-521)	Respiratory pneumonia.....	2	1	3	6.1	2.0
(812-)	Accidents	0	1	1	2.0	2.8
	All other causes.....	5	0	5	10.3	11.9
		36	13	49	100.0	100.0

*Numbers in parentheses indicate Sixth Revision International Statistical Classification numbers.

study group. The death rate in the low economic groups was nearly four times that in the middle economic group—22.6 per cent as compared with 5.2 per cent. The percentage of deaths in the high economic group, in which there were only 24 subjects, was very close to the average for the total group—8.3 per cent.

The original 577 subjects were all well at the time of the first examination and none had been under the care of a physician for a period of at least three months. However, 243 (or 42.1 per cent) of the total group were referred to private physicians because of abnormalities noted in the physical examination or in laboratory studies. The list of reasons for referral was detailed in the previous paper. At the end of four years, only 17 (or 5.1 per cent) of those not needing medical attention had died, while 32 (13.2 per cent) of those referred to physicians had died.

There appeared to be a relationship between systolic blood pressure and mortality, as shown in Table 4. The death rate of both males and females with diastolic blood pressure over 100 mm. of mercury was somewhat higher than among those with diastolic pressure below that level, although the correlation was not as pronounced as it was in relation to systolic pressure.

No striking relationships between the death rate in the group and the following factors were noted: Hemoglobin content of the blood, blood glucose, blood creatinine, caloric intake, protein intake, fat intake, carbohydrate intake, calcium intake, iron intake, or cholesterol intake. However, there appeared to be some relationship between mortality and the cholesterol content of the blood (Table 5).

This finding of a higher percentage of deaths in the group of subjects with low or normal blood cholesterol might seem contrary to the general belief that blood cholesterol bears a relationship to arteriosclerosis and myocardial infarction. However, Gofman and associates at the Donner Laboratory have expressed belief that the total blood cholesterol bears little relationship to the S_r 10-20 class of lipoprotein which they associate with arteriosclerosis. Unfortunately, the ultracentrifuge technique was not applied

TABLE 4.—Deaths in relation to systolic blood pressure and sex; 577 subjects—San Mateo County

Systolic pressure mm. of mercury	No.	Total group		No.	Males		No.	Females	
		Deaths	Pct.		Deaths	Pct.		Deaths	Pct.
Less than 140.....	115	5	4.3	67	4	6.0	48	1	2.1
140-179.....	300	21	7.0	148	18	12.2	152	3	2.0
180 and over.....	161	23	14.3	65	14	21.5	96	9	9.4
Not stated.....	1	....	....	....	....	....	1	....	....
Total	577	49	8.5	280	36	12.9	297	13	4.4

TABLE 5.—Relation of death rate to cholesterol content of blood

Total cholesterol (mgm. per 100 ml. of blood)	No. of persons	Died	Percent
Less than 220.....	145	22	15.2
220-279.....	276	19	6.9
280 and over.....	148	6	4.1
Not determined.....	8	2	....

TABLE 6.—Relation of death rate to intake of vitamin factors

	Subjects	Deaths	Mortality	Pct.
Vitamin A (international units)				
Less than 5,000.....	158	22	13.9	5.4
5,000-7,999.....	160	11	6.9	
8,000 and over.....	211	9	4.3	
Not determined.....	48	7	....
Niacin (mg.)				
Less than 10.....	154	16	10.4	6.9
10-13.....	196	16	8.2	
14 and over.....	179	10	5.6	
Not determined.....	48	7	....
Ascorbic acid (mg.)				
Less than 50.....	130	24	18.5	4.5
50-109.....	251	9	3.6	
110 and over.....	148	9	6.1	
Not determined.....	48	7	....
	577	49		

to the specimens of blood from subjects included in the San Mateo County study.

There seemed to be relationships between mortality and the intake of vitamin A, niacin and ascorbic acid. The death rate was greater among subjects with a low intake of these vitamin factors than it was among subjects with a higher intake (Table 6).

No definite conclusions should be drawn from the data. The numbers involved in the calculations were small—577 subjects and 49 deaths. However, the data on deaths after four years did suggest the following:

1. In persons over age 50, the death rate in males is higher than in females.

2. That those in the low economic levels have a shorter expectancy after age 50 than those in the middle or upper economic levels.

3. That patients, particularly males, over 50 years of age with systolic pressures over 180 mm. of mercury, do not have a very favorable prognosis.

4. That low vitamin intake, particularly vitamin A, niacin and ascorbic acid, appear to predispose to a high mortality.

MORBIDITY

As was previously mentioned, 306 persons from the original study were returned for the second evaluation, physical, dietary and laboratory. Of the 306, there were 78 (25.5 per cent) who reported no illness whatever during the four-year period. Two hundred and twenty-eight (74.5 per cent) reported one or more illnesses during the period (average 1.5 illnesses per person). Seventy-two per cent of the males and 77 per cent of the females reported illness. The smallest percentage of illness was in the 60 to 69 age group (71.2 per cent). It was 75.4 per cent in the 50 to 59 age group and 78.1 per cent in the 70 and over group.

The 228 persons reporting illness during the four-year period reported 341 illnesses. Using the Sixth Revision of the International Statistical Classification, these 341 illnesses were classified into five general groups and a sixth group of "all other causes." These five groups (with the parenthetical numbers assigned by the International Classification) were:

Nervous system and sense organs (330-398, 780-781, 790-791).

Circulatory system (400-468, 782).

Respiratory system (470-527, 783).

Digestive system (530-587, 784, 785).

Musculoskeletal system (690-748).

All other (001-326, 590-637, 786-789, 792-795).

The distribution of these 341 reported and confirmed illnesses into these five groups was as follows: Nervous system, 10.8 per cent; circulatory system, 18.8 per cent; respiratory system, 18.8 per cent; digestive system, 14.6 per cent; musculoskeletal, 13.8 per cent; all other, 23.2 per cent. The same percentage distribution was then calculated for the various sub-classifications. Only the apparently significant differences will be reported here. In the age group 50 to 59, respiratory disease accounted for the highest percentage of illness, while in the group 60 to 69 years of age, circulatory disease was high; and in the group over 70 years of age, nervous system disease (probably cerebral hemorrhage) was nearly twice as common as in the groups under 70. Digestive system and musculoskeletal disease accounted for a very few illnesses in the age group over 70.

The incidence of respiratory disease was higher in males than in females, but with regard to the other four disease groups there was remarkably little difference between the sexes.

Disease of the circulatory system was of highest incidence among persons with systolic pressure over 180 mm. of mercury and diastolic pressure over 100 mm., and respiratory tract and digestive tract diseases were highest in those with low (140 mm. or less) systolic blood pressure.

Persons in the low economic group had a considerably lower incidence of nervous, circulatory, respiratory or musculoskeletal disease but a much higher incidence of digestive system disease than did subjects in the middle or upper economic groups.

Among subjects not referred to physicians in the original study there was more nervous system and respiratory disease than there was among those who had been referred, but the incidence of circulatory disease was highest among those who had been referred.

In subjects with low hemoglobin (less than 13 gm. per 100 cc.) there was high incidence of respiratory disease. Among persons with high hemoglobin content (15 gm. per 100 cc. and over), the incidence of digestive system disease was relatively high and of musculoskeletal disease very low.

The higher the caloric intake, the lower the incidence of circulatory disease and the higher the incidence of digestive tract disease. Also, among persons with a high caloric intake (2,600 calories or more daily) the incidence of nervous system disease was very low.

The amount of protein intake seemed to have little effect on illness associated with the nervous system or the circulatory system, but among subjects whose protein intake was in the middle range (60 to 79 gm. a day) the incidence of respiratory disease was high and of digestive and musculoskeletal system disease low.

In subjects with low intake of vitamin A (less than 5,000 international units) the incidence of nervous system, circulatory system and respiratory system disease was high and the incidence of digestive and musculoskeletal system disease was low. Those with a high vitamin A intake (8,000 international units and over) had a low incidence of nervous system disease and circulatory disease, had about the group average of respiratory and digestive system disease, but a high incidence of musculoskeletal system illness.

Low thiamine intake (less than 0.80 mg. a day) seemed to be associated with nervous system disease and circulatory disease; the higher the intake of thiamine, the lower the incidence of disease of these two systems.

Diseases of the circulatory system and the digestive system were associated with low intake of ascorbic acid (less than 50 mg. per day). Among persons with a high intake of ascorbic acid (110 mg. and over) there was a low incidence of nervous system and circulatory system disease.

Two sets of data were available regarding cholesterol—the calculated cholesterol intake and the cholesterol content in the blood. Those with low content of cholesterol in the blood (less than 220 mg. per 100 cc.) showed a high incidence of musculoskeletal disease, but those with low intake of cholesterol (less than 450 mg. a day) showed no remarkable deviation from the group average incidence of musculoskeletal disease. Subjects with a high content of cholesterol in the blood had low incidence of musculoskeletal disease while those with a high dietary intake of cholesterol had a high incidence of musculoskeletal disease. Among subjects with a high level of cholesterol in the blood the incidence of circulatory disease was high, but those with a high cholesterol intake (760 mg. a day or more) had less circulatory disease than the average incidence for the whole group.

No conclusions should be drawn from these stated relationships except that there is an urgent need to carry on further intensive research into the effect of nutrition on the health status of persons over 50 years of age.

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Coronary Sclerosis and Coronary Thrombosis

Industrial Aspects Associated with Compensation

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CORONARY ARTERY DISEASE has become more and more closely related to industrial occupation during the last 15 years. As medical science gradually increases the life span of the population, and as there is an increasing tendency not to expect retirement at the age of 65 years, industry becomes more cognizant of the relationship between its employees and their degenerative diseases. It has been estimated by the American Heart Association that somewhere between 750,000 and 1,000,000 attacks of acute coronary occlusion are reported each year, and there are probably many more either misdiagnosed or not observed by a physician.

Before going into the industrial relationship of coronary artery disease, it would probably be well to review and adjust our thinking and terminology with particular reference to angina pectoris, coronary insufficiency, coronary thrombosis and myocardial contusion, and to follow this with the application of such knowledge to industrial situations, recognizing that, while this has been done numerous times by other writers and teachers in this field, the physiology and pathology applied to the clinical picture is important enough to justify repetition.

There have been many changes in the past years regarding concepts of coronary artery disease and myocardial infarction, with reference to origin, diagnosis, treatment and prognosis. Studies on the pathogenesis of coronary sclerosis and arteriosclerosis in general, with particular reference to atherosclerosis, cholesterolemia and certain other lipoproteins in the blood, are proceeding slowly but surely, and it is not the purpose of this paper to further elaborate in this direction. The underlying predisposition to atherosclerosis appears to be in the nature of a metabolic defect involving the biosynthesis, transport and catabolism or excretion of certain lipoids, chiefly cholesterol, as was noted by Gutman⁷ and many others. It is probable that future developments along this line will affect for years to come the treatment of patients in the older age groups and patients who have had infarction.

Diagnostic procedures in the clinical studies of angina pectoris, coronary sclerosis and coronary thrombosis have not changed materially in the past decade. The greater use of ballistocardiography,

• The California compensation laws and labor codes make adjudication of industrial coronary disease, for purposes of determining industrial liability, difficult for the attending physician. From medical writings on the subject in the past decade and from personal experience before the Industrial Accident Commission the author draws suggestions for a sounder approach on a physiological and pathological basis. Criteria for use in determining such liability in cases of coronary heart disease due to employment are outlined.

angiography and peripheral arterial surgical operations together with cardiac operations has increased the ability to understand and diagnose underlying vascular states. For many years coronary occlusion was considered a disease of very high mortality, high morbidity and poor prognosis; only recently has come the increased ability to differentiate the various types of coronary artery disease and to recognize the distinguishing features of each. The increasing use of routine electrocardiograms, particularly in pre-employment and life insurance examinations, has been of great aid in uncovering previously unknown coronary artery disease.

Treatment also has undergone many changes during the past few years. Previously many patients diagnosed as having severe heart disease following a single attack of acute pain in the chest were given a minimum of eight to ten weeks of bed rest and were told from then onward to lead a sedentary, quiet and unproductive life. Now it is realized that many of these patients can be returned to their previous occupation, many of them with only four to five weeks of active treatment. The differentiation of so-called "good risk" from "bad risk" cases of coronary artery disease, as described by Russeck²⁰ and co-workers in a study of 1,047 cases of acute myocardial infarction, has, in the author's personal experience, been extremely useful therapeutically. Using the Russeck statistics, it is pretty well shown that in "good risk" cases the mortality rate is approximately 3 per cent, as against 60 per cent for the "poor risk" cases. These figures apply irrespective of age, and the outlook for a severe or mild attack in an elderly patient is no worse than in a younger

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patient, the prognosis depending not on the age but on the degree of pathologic change and complications. Most clinicians agree that the use of anticoagulants, by decreasing the complications of embolic phenomena, has definitely decreased the mortality rate in the poor risk cases. While treatment of patients with myocardial infarction varies considerably with the individual physician, it has been the author's practice to continue the use of coronary dilators and mild sedation indefinitely following an acute attack of coronary occlusion of the poor risk type. The recurrence of coronary occlusion in patients so treated, it is felt, has been definitely less than that generally reported in the literature.

Coronary artery disease can be considered in two classifications—acute and chronic. There are two major types of acute coronary disease—acute coronary occlusion and acute coronary insufficiency, which differ from each other both pathologically and electrocardiographically. From the standpoint of therapy and prognosis, it is essential to differentiate these two types of episodes, even though they may simulate each other clinically. Master¹⁵ estimated that 95 per cent of the cases can be differentiated by electrocardiographic patterns. Acute coronary occlusion results from progressive degenerative arteriosclerotic disease, and occurs when a thrombus forms in a preexisting sclerotic artery, either directly on an arteriosclerotic plaque, or secondary to a subintimal hemorrhage in such a plaque. While it has been reported that subintimal hemorrhage may form a hematoma large enough to occlude the lumen without thrombosis, this probably is quite rare. It is an established fact that hemoconcentration, slowing of blood flow, or any factor which makes blood coagulate quicker, favors formation of thrombi in the coronary or any artery, while rupture of a subintimal capillary and plugging of a coronary vessel, due to subintimal hemorrhage, may rarely occur.

When occlusion of the vessel is complete, or nearly so, there is more or less rapid obstruction of a medium sized or large artery by thrombus, which results in a large confluent through-and-through infarct, unless the patient dies very early. Inasmuch as myocardial infarction commonly extends from the endocardium to the pericardium, mural thrombi form, which can cause peripheral embolic complications, and pericardial irritation occurs with the resultant clinically demonstrable typical friction rub.

The clinical symptoms may be quite variable. If severe pain is present, it is usually substernal, precordial and referable to the shoulders, jaw, back, the inside of the arms and frequently to the wrists. Typical electrocardiographic changes are present in this situation, consisting principally of deep Q-waves, early ST elevation, T-wave inversion and continuing progressive changes with eventual permanent abnormalities of the electrocardiographic tracing.

Acute coronary insufficiency, on the other hand, includes several different kinds of acute coronary episodes, the simplest type being that associated with, or producing, angina pectoris which results from a temporary functional inadequacy of the coronary circulation, and pain, as just described. Typical precipitating factors are excitement, exertion, cold, ingestion of food, coitus, and symptoms are promptly relieved by rest and administration of nitroglycerine, with attacks subsiding usually in a few minutes and rarely lasting more than 25 or 30 minutes. If coronary insufficiency persists, however, it brings about myocardial anoxia and infarction of the myocardium with all the signs and symptoms of coronary occlusion. However, in coronary insufficiency the changes in results of laboratory tests are less severe than they are in coronary occlusion, the decrease in blood pressure is not as great, the fever is not as high, the leukocytosis is less and the acceleration of sedimentation rate may appear very late. These modifications are due to the fact that the infarction in the heart muscle is a focal one, with disseminated areas of necrosis, limited to the subendocardium and papillary muscles. Since the pericardium is not involved, the clinical sign of the precordial friction rub is absent, and the similar sparing of the endocardium prevents embolic phenomena more commonly occurring with coronary occlusion. Electrocardiographically, depression of the ST segments with T-wave inversion occurs, Q-waves are absent and electrocardiographic changes frequently last only a few days, the pattern then usually returning to normal.

In the present machine age, and industrially speaking, one must not lose sight of the possibility of direct cardiac injury. Much has been written in surgical journals regarding diagnosis, treatment and prognosis of penetrating wounds of the thoracic cage and of the heart itself; and a decade ago there was considerable literature regarding direct nonpenetrating injuries of the heart. Numerous case reports by Boas,² Leinoff,^{10, 11} Race¹⁹ and others,^{8, 17, 18} called attention to the fact that these injuries might frequently be overlooked because of more obvious thoracic pulmonary lesions. It is interesting to note that, as expected, the electrocardiographic changes in these cases were those consistent with coronary thrombosis, and that in cases in which necropsy was carried out, thrombosis or occlusion of the coronary vessels were absent. The macroscopic and microscopic examinations of the heart muscle showed extensive hemorrhages and patchy interstitial muscle necrosis typical of hemorrhagic infarction, rather than infarction of the anemic type that occurs as a subsequence of coronary obstruction. MacGill¹⁷ and Kissane⁹ recently again called attention to cardiac injury of this type.

The foregoing discussion of the pathogenesis of coronary sclerosis, angina pectoris and coronary

contusion, and of the factors producing the onset of coronary occlusion and coronary insufficiency is background for specific consideration of the industrial aspects of these conditions. Physicians interested in this subject are familiar with the work of Master and his associates,^{12, 13, 14, 15, 16} who have presented statistical studies stressing the equal incidence of cardiac infarction in laborers, professional persons, white collar workers and others of the general populations. They observed that in fewer than 2 per cent of cases of acute myocardial infarction was there unusual or severe muscular strain immediately preceding. On the other hand, Goodson⁶ and Yater and co-workers²² found that in the younger age group the terminal cardiac attack occurred during strenuous activity in as many as 32 per cent of cases and during mild and moderate activity in 52 per cent or more. In only 15 per cent did it occur at rest. These data are supported by statistics of French and Dock,⁴ who found that in 100 cases of fatal coronary sclerosis in young soldiers, 35 of the patients died one to several hours after vigorous exercise. Seigler²¹ observed that physical and emotional strain may be definite exciting factors in the pathogenesis of acute coronary changes and myocardial injury in the presence of coronary atherosclerosis. There are, then, many opinions and certainly controversial issues with regard to exertion or effort as a precipitating factor, which of course is the basis for the majority of workman compensation claims. It is probably generally accepted that continued coronary insufficiency over a period of thirty minutes or longer following exertion, resulting in myocardial infarction, is related to that exertion. However, as was brought out by Garnett,⁵ there is no disease entity in medicine that demands a more careful and detailed history, with particular reference not only to the actual events immediately surrounding the onset of chest pain, but to a careful investigation of possible cardiac damage and symptoms prior to that time. When coronary occlusion and coronary insufficiency are differentiated, the latter is found to be a common condition and is frequently associated with a precipitating factor. However, coronary occlusion follows unusual exertion in only 2 per cent of cases generally, as shown by Master,¹⁵ although the incidence of this relationship may be as high as 35 per cent in young persons, as shown by French and Dock.⁴ In the light of the fact that a vast majority of patients in such cases in industry are over 45 years of age, the relationship of coronary occlusion to effort remains a very moot question, even to the point that the association of even so small a proportion as 2 per cent with exertion could be actually coincidental. The author is inclined to agree with Master that, considering the severe or moderate exercise the average person does in a period of 24 hours, if effort were a precipitating fac-

tor in coronary occlusion, the incidence of attacks during strain would be vastly greater. Careful questioning can elicit that premonitory symptoms were present in at least half of the patients; that in all probability the occlusion was already formed before the attack and that simple effort produced further coronary insufficiency, resulting in acute symptoms and the production of the myocardial infarction.

From a strictly industrial standpoint, there is no question of compensability in cases of contusion of the heart, whether it results in the very rare coronary occlusion or the usual direct myocardial hemorrhagic infarction. However, when an employee has an attack of chest pain while on the job, and the final diagnosis of coronary thrombosis is made, only a careful history can supply information for ascertaining whether the illness be rated as compensable. Inasmuch as in the State of California aggravation of a preexisting condition is grounds for assumption of liability by the insurance company or carrier,* it is even more imperative for a physician to establish the presence of preexisting coronary disease for the patient, or the absence of it for the insurance carrier. To further complicate this situation, the problem of determining the role of effort in the onset of an attack of coronary occlusion is masked by economic considerations, and, as Behneman¹ said, five prejudiced parties have a vital interest in the outcome of a cardiac accident after injury or stress—the patient, the employer, the trade union, the insurance carrier and the physician. Without reflecting upon the honesty of the vast majority of persons, the need for economic compensation may distort judgment, point of view and even memory; and it is rare that the consulting physician, the medical examiner for the insurance carrier, or an independent medical examiner for the Industrial Accident Commission is able to get the correct story, usually months after the occlusion has occurred. One has only to review cases heard by the Industrial Accident Commission to see the different stories told by the patient, first to his family doctor and later to the examiners for the insurance carriers and the Commission. It is widely accepted by the profession that an attack of acute coronary occlusion, or chest pain, which occurs at the time of or immediately following undue exertion should be classified as a compensable coronary occlusion (even though, as has been noted herein, the bulk of medical writings on this subject does not agree with this conclusion).

Accident Commission referees have informed the author that most of their difficulty in evaluating claims involving heart disease is due principally to the lack of either understanding or adequate presentation by the physician of a patient's claim. It is not

*Labor Code, Sec. 4663, states: "In case of aggravation of any disease existing prior to a compensable injury, compensation shall be allowed only for the proportion of the disability due to the aggravation of such prior disease which is reasonably attributed to the injury."

enough that the patient had an attack while at work. It must be shown that the attack was caused by the nature of his job or that a preexisting condition was aggravated by the job. Therefore the following approach to a classification of these lesions is suggested, with recognition, of course, that each case individually must be appraised on its own merits.

I. Clear-cut cases (compensable).

1. Direct cardiac injury. (a) Penetrating cardiac wounds. (b) Nonpenetrating cardiac contusion, direct and indirect.

2. Severe protracted physical exertion and activity greater than normally engaged in, over a period of time sufficiently long to produce infarction, with symptoms persisting for 30 minutes or longer following the cessation of the provoking factor (coronary insufficiency with infarction).

II. Questionable or controversial.

1. History of previous vascular disease with distress on exertion, followed by symptoms and findings of acute infarction, occurring on the job with usual or moderate activity. (Angina pectoris due to coronary insufficiency.)

2. Acute infarction immediately following severe effort; no previous history or symptoms; under the age of 45.

III. Nonindustrial.

1. History of previous periodic anginal distress or vascular disease with subsequent acute infarction occurring at work with routine duties.

2. History of no previous distress, acute signs and symptoms of myocardial infarction, in males over 45 years of age, with routine duties or moderate exertion of short duration.

The solution to the problem, of course, could be worked out by a committee appointed by the American Heart Association, the American Medical Association, the Industrial Medical Association and others interested in this phase of medical practice, to establish criteria for use by the courts, commissions and referees in cases of cardiac injury or disease allegedly arising out of or caused by the nature of the job. The author agrees with Garnett⁵ and others that the enactment of adequate compensation laws to cover this specialized field of industrial liability in heart diseases and allied conditions is definitely needed and past due. Such laws are not without precedent; special legislation concerning occupational diseases as distinct from occupational injury has been enacted in some states. It has been suggested that a complete overhauling of the Industrial Accident Commission and of the California compensation laws in general is in order. There is considerable question as to whether the compensation laws of the State of California should be amended, as has already been done in New York

State as noted by Master,¹⁵ to provide that a worker shall receive compensation when he becomes ill while at work, regardless of previous illness. Incidentally, similar provisions have been made in portions of the California Labor Code, namely with firemen and policemen compensation.³ Such changes in labor codes would do away with much controversy in this question of industrial coronary occlusion, coronary insufficiency and coronary contusion. But the changes would, of course, necessitate readjustment of insurance premiums, with greater expense to employers. It would also push us further toward the socialistic state, to which many of us do not subscribe.

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CASE REPORTS

- Meningoencephalitis Due to Infectious Mononucleosis
- Limited Chronic Tension Pneumothorax with Lobar Atelectasis
- Cortisone in Treatment of Trichinosis

Meningoencephalitis Due to Infectious Mononucleosis

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IN THE PAST FEW YEARS the occurrence of central nervous system involvement in infectious mononucleosis has been noted in the literature with increased frequency.^{1, 2, 4, 5} The estimated incidence of this complication is probably less than one per cent, but the mortality rate due to central nervous system involvement is apparently high. Lawrence³ noted that neurological complications were the cause of death in seven of sixteen reported fatal cases of infectious mononucleosis. Any part of the central nervous system may be affected. The report herewith brings to five the number of reported cases of acute meningoencephalitis complicating infectious mononucleosis.

REPORT OF A CASE

The patient, a 24-year-old white man, was apparently well until May 7, 1954, when mild retro-orbital headache, malaise, anorexia, and a feeling of light-headedness developed. The symptoms persisted but the patient was able to continue attending college classes. On May 12, 1954, he noted the onset of chilliness and excessive perspiration and on May 13 he was admitted to the hospital.

The general health of the patient had been excellent and, except for an injury of the neck incurred in a fall at the age of 18, he had had no serious illness.

At the time of admittance the temperature was 98.8° F., the pulse rate 90, respirations 20 per minute and the blood pressure 112/84 mm. of mercury. There were scattered acniform areas over the upper back. The vessels in the pharynx were slightly engorged and there were two small spots of white exudate on the right tonsil. Scattered lymph nodes about 0.5 cm. in diameter were palpated in both the cervical and the axillary areas. A prominent epitrochlear node was present on the right. The remainder of the examination was within normal limits.

On the first hospital day the temperature was

99.4° F. A feeling of light-headedness still was present and the patient vomited twice after the evening meal. Results of a neurological examination at this time were again normal.

On the second hospital day at 6:20 a.m. the patient suddenly had generalized clonic and tonic convulsions without incontinence, lasting some thirty seconds, following which he was semicomatose. Thirty minutes later generalized convulsion occurred again, characterized by violent athetoid motions of all extremities, wandering divergent eye movements and incontinence. This episode lasted some three hours. Sedation was parenterally administered and the patient gradually subsided into a comatose, restless state. There were no signs of meningeal irritation or paralysis. The reflexes were hyperactive but not of pathological order. The temperature rose to 104° F. (rectal). The patient remained comatose for approximately 48 hours. Moderate nuchal rigidity developed within ten hours after the convulsion and abdominal and cremasteric reflexes were absent; as extensor plantar responses were present on both sides.

On the fourth hospital day the temperature was 99.6° F. and the patient began to respond drowsily to simple questions. In the succeeding 24 hours he gradually became more alert, although still lethargic and slurring and slow of speech. From this point on, improvement was rapid. The abdominal and cremasteric reflexes returned and extensor plantar response had disappeared by the sixth hospital day. The generalized lymphadenopathic condition was more pronounced but the minimal spotty exudate in the pharynx had subsided. Nuchal stiffness persisted to some degree until the twelfth hospital day. At this time for a four-day period the patient noted polydipsia and polyuria, with an oral intake of 7,200 cc. of fluids on one day and output of 5,000 cc. of urine. The specific gravity of the urine during this transient phase was 1,001. These symptoms subsided spontaneously and the patient was discharged on the nineteenth hospital day without residual effect of the severe illness except for a generalized lymphadenopathic condition.

Results of blood, urine and spinal fluid studies are listed in Table 1. No bacterial growth was obtained on either blood or spinal fluid cultures. Results of skin tests with first strength purified protein derivative and 1:100 dilutions of coccidioidin were

From the Medical Service, Cowell Memorial Hospital, University of California, Berkeley 4.

TABLE 1.—Laboratory data in case of meningoencephalitis

	May 13	May 15	May 16	May 18	May 20	May 24	May 28
<i>Blood</i>							
Hemoglobin (gm. per 100 cc.)	13.8						13.6
Leukocytes (per cu. mm.)	6,900	15,400	11,000	11,000	12,200	11,000	7,200
Neutrophils per cent:							
Segmented	31	69	46	30	29	34	66
Non-segmented	7	10	16	6	9	14	8
Lymphocytes	62	12	35	64	60	45	25
Atypical (per cent)	70	50	90	70	50	80	30
Monocytes			3				
Eosinophils					2		
Heterophil titer (guinea pig absorption)	1:10			1:20	1:80	1:80	1:160
Sedimentation rate (mm. per hour Wintrobe)	7					16	7
<i>Cerebrospinal fluid</i>							
Appearance		clear		clear			
Pressure (mm. water)		110		135			
Cells							
Leukocytes (cu. mm.)		10		6			
Lymphocytic (per cent)		80		5			
Sugar (mg. per cent)		108		73			
Protein (mg. per cent)		175		90			
Gold curve		1112231100		0001110000			
Wassermann				Neg.			
Chlorides (mg. per cent)				638			
Heterophil antibody titer				1:10			

negative. Complement fixation studies on the serum for western equine encephalitis, St. Louis encephalitis and mumps were negative. Electrolyte studies of the serum during the phase of polyuria were within normal limits. No abnormalities were noted in liver function studies. Hemolytic staphylococcus aureus grew on cultures of material taken from the throat.

COMMENT

The cause of infectious mononucleosis is unknown, but the concept of a virus as the infecting agent is generally held by most authorities. The pronounced variability from case to case in symptomatology, physical findings and the duration of illness make this a most bizarre disease. If central nervous system symptoms are present, they may appear at the onset, although most commonly they do not occur until one to three weeks after onset.

In the case reported upon herein, the central nervous system manifestations appeared during the first week of his illness. The appearance of the pharyngeal exudate and the enlargement of lymph nodes were initially suggestive of the diagnosis. The confirma-

tory laboratory studies and the rising heterophil titer substantiated it. The spleen was never palpable.

The clinical picture produced by involvement of the nervous system may be indistinguishable from that caused by many other factors. Since the systemic signs of infectious mononucleosis may be minimal, it is important to realize the value of heterophil antibody tests in obscure cases of central nervous system symptomatology.

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Limited Chronic Tension Pneumothorax with Lobar Atelectasis

Two Cases Treated by Lobectomy and Decortication

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CHRONIC PNEUMOTHORAX with positive pressure secondary to a pulmonopleural or bronchopleural fistula of valvular type occurs in many conditions¹⁰ such as tuberculosis, pulmonary suppuration of other types, spontaneous rupture of emphysematous

blebs and in empyemas in which the pus is coughed up and does not reform because of antibiotic therapy. Usually the involved lung is more or less uniformly collapsed but occasionally previous pleural symphysis limits the extent of pneumothorax so that collapse is localized to one or more lobes of a lung.

Two patients affected by limited tension pneumothorax with complete lobar collapse and suppuration were observed by the author within a month and both were treated by lobectomy and decortication.

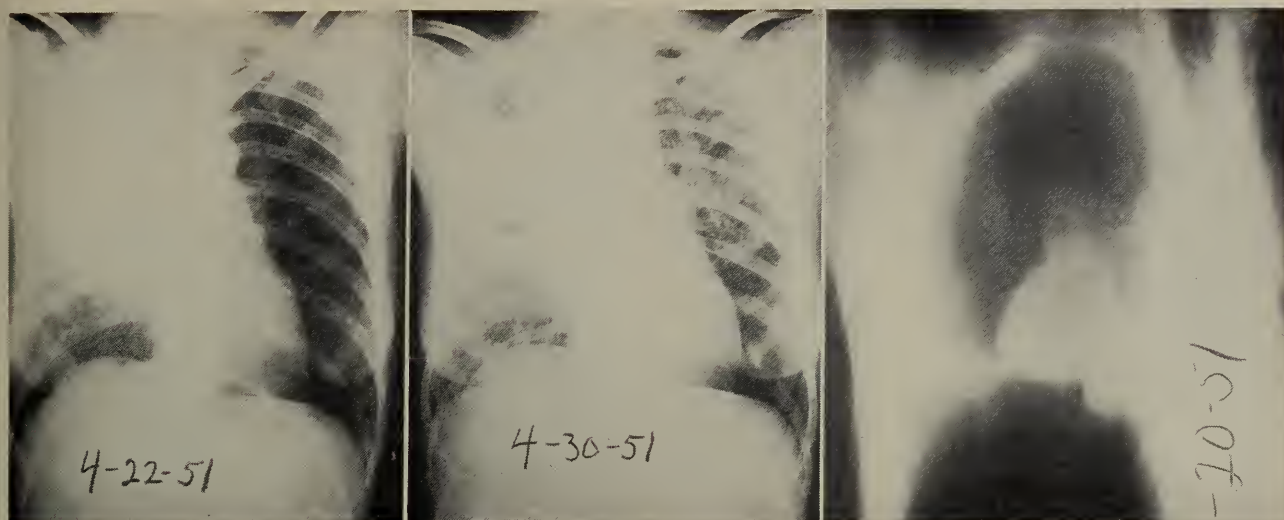


Figure 1.—(Left) A solid density with lack of aeration in the upper two-thirds of the right lung field. (Center) Partial clearing of the density in the right upper lung field with two fluid levels and partial collapse of the upper lobe. The left lung shows a transient diffuse infiltration. (Right) Planigram showing the collapsed airless right upper lobe with surrounding pneumothorax.

Reports of similar cases similarly treated were not noted in a summary review of the literature.

REPORTS OF TWO CASES

CASE 1. A 38-year-old housewife was admitted to San Diego County General Hospital April 22, 1951, with a history of onset of fever, general malaise and "flu-like" symptoms three weeks before. Two weeks before admittance she noted the onset of cough, productive of two tablespoonfuls of yellow-green sputum daily, and the cough persisted until admission. She also had mild diarrhea.

The patient appeared acutely ill and dehydrated when examined upon admittance. The temperature was 100.2° F. and the pulse rate 110 per minute. There were coarse rales, dullness and diminished breath sounds over the right upper quadrant of the chest posteriorly and anteriorly. The hemoglobin content was 6.6 gm. per 100 cc. of blood and leukocytes numbered 16,050 per cu. mm. An x-ray film of the chest (Figure 1) showed an airless density occupying the upper two-thirds of the right lung field. A Ghon's complex was present in the left lung field.

Penicillin was administered for three days, then aureomycin for a week, and then penicillin again until July 3, 1951. Four pints of blood was infused to correct anemia. The maximum daily temperature averaged 101° F. for the first week, 100.6° F. the second week, 99.6° F. the third week, and continued so for the next 12 weeks. The general condition of the patient improved gradually. The sputum decreased in amount but remained creamy in character. On May 4 thoracentesis was attempted at three different sites and only air was obtained. Thoracentesis was done again June 22 and again no fluid was withdrawn, but air was obtained and pressures were positive after removal of 200 cc. of air. Bronchoscopic examination was carried out and the tracheobronchial tree was normal except for redness

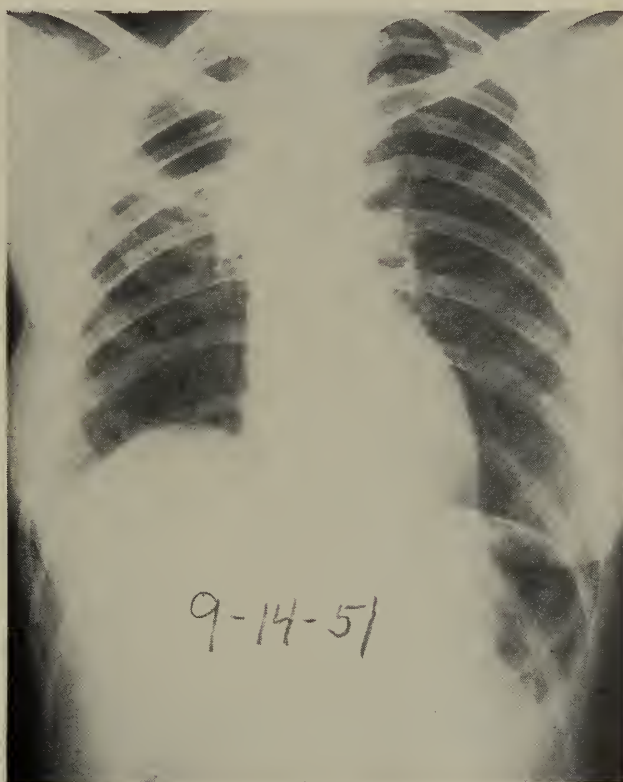


Figure 2.—Preoperative film showing progressive clearing of the infiltration, the pneumothorax no longer containing any fluid, and further shrinking of the upper pocket lobe.

and edema around the orifice of the right upper lobe. Purulent secretions were obtained from the bronchus serving this area and from the remainder of the right bronchial tree. X-ray films of the chest a week after admission (Figure 1) showed two air pockets with fluid levels and partial collapse of the upper part of the right lung associated with diffuse bilateral soft infiltration. Later films (Figures 1 and 2) showed progressive collapse of the upper part of the

right lung, with pneumothorax becoming more prominent, and disappearance of the fluid and clearing of the soft infiltration (Figure 1).

Concentrates and cultures of specimens of sputum taken April 23, May 1, May 23 and June 19 were negative for acid fast bacilli. A specimen obtained May 14 was negative on concentrate and positive on culture for acid-fast bacilli. Because of the positive culture the patient was transferred to the tuberculosis division of the hospital on July 3. There five consecutive daily sputum specimens were examined for acid-fast bacilli by concentrate and culture with negative results. On July 9 administration of dihydrostreptomycin, 1 gm. twice weekly, and para-amino-salicylic acid, 12 gm. daily, was started. By this time the patient was afebrile and practically asymptomatic except for expectoration of a small amount of purulent sputum.

On September 27 operation was done with the patient in the face down position, under pentothal-nitrous oxide-ether anesthesia. The right side of the chest was opened through the fifth intercostal space. The parietal pleural peel was freed from the chest wall by sharp and blunt dissection. The middle and lower lobes were normal but the pleural space over them was obliterated. The pneumothorax space was opened and the upper lobe was found to be completely collapsed, with small reddish elevated areas of what appeared to be granulation tissue on its surface. The upper lobe was then resected with the parietal peel, the bronchus being closed with 4-0 silk and the vessels individually ligated with 2-0 silk. Two intercostal tubes were inserted and the incision closed in layers with interrupted silk.

Postoperatively the patient did well, the temperature becoming normal on the third postoperative day from a high of 101.6° F. on the second day. On the first postoperative day, because of x-ray evidence of possible middle lobe atelectasis, bronchoscopic examination was carried out but atelectasis was not present. Streptomycin and para-amino-salicylic acid were continued for two months postoperatively, and the patient was discharged on November 13, 1951. A film of the chest was made June 6, 1952 (Figure 3) and at that time the patient said that she was feeling fine and had had no recurrence of symptoms.

The pathologist described the upper lobe specimen as a "shrunk irregular nubbin which showed dilated thick walled bronchi and peribronchial fibrosis." There was no gross nor microscopic evidence of tuberculosis, and there was no growth of acid-fast bacilli on cultures of material from the pleura and the upper lobe.

The diagnosis was: (1) Chronic fibrous pleuritis; (2) bronchiectasis and pulmonary fibrosis.

COMMENT ON CASE 1

In this patient there was right pleural effusion limited to the upper lung field. The effusion produced upper lobar collapse and probably became infected, although there is no definite proof that the fever, leukocytosis and signs of inflammation were from empyema rather than from pulmonary sup-

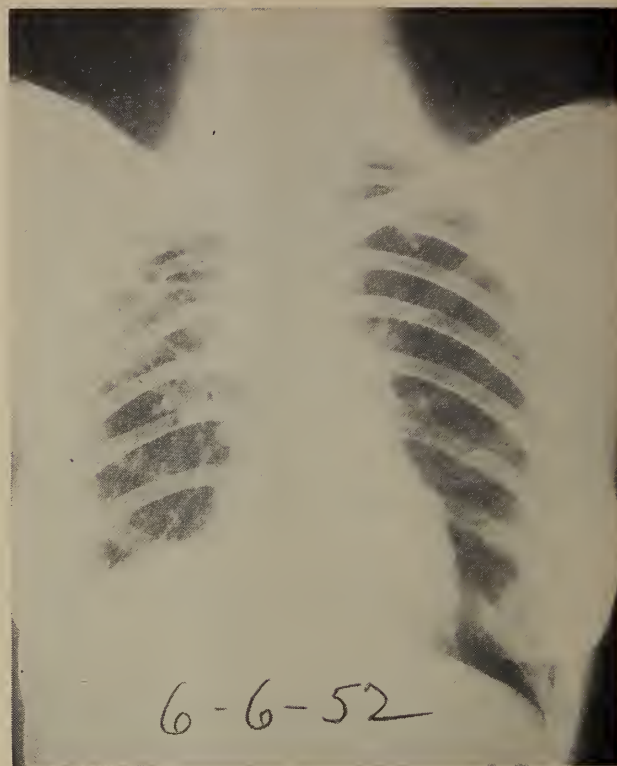


Figure 3.—After decortication and right upper lobectomy. Note good expansion of the remaining lobes.

uration. Treatment with antibiotics apparently controlled the infection but a fistula developed between the pleural space and the lung or bronchus, as serial films showed progressive increase of air and decrease of fluid in the pleural cavity with concomitant collapse of the upper lobe.

In light of all the evidence it seems the isolated culture showing acid-fast bacilli was probably a laboratory error, unless (improbably) there was originally a tuberculous effusion secondary to parenchymal tuberculosis in either the middle or lower lobe.

CASE 2. A 45-year-old woman was admitted to Balboa Hospital Sept. 6, 1951, with chills, fever, cough productive of up to a cupful of yellow sputum daily for a week and loss of 20 pounds in body weight and general malaise.

Fifteen months previously the patient had had a similar attack accompanied by pain in the right side of the chest for several weeks. She had been treated elsewhere with penicillin.

Upon examination the patient seemed acutely ill and a "wet" cough was noted. The temperature was 101.2° F. Shotty, freely moveable nodes were palpated in the cervical and axillary regions. There were diminished to absent breath sounds and tactile fremitus over the lower part of the chest on the right side both anteriorly and posteriorly. The motion of the chest wall was normal.

An x-ray film of the chest (Figure 4) showed an area of increased radiolucency at the right base with absence of lung markings and depression of the right diaphragm. There was also a sharply demar-

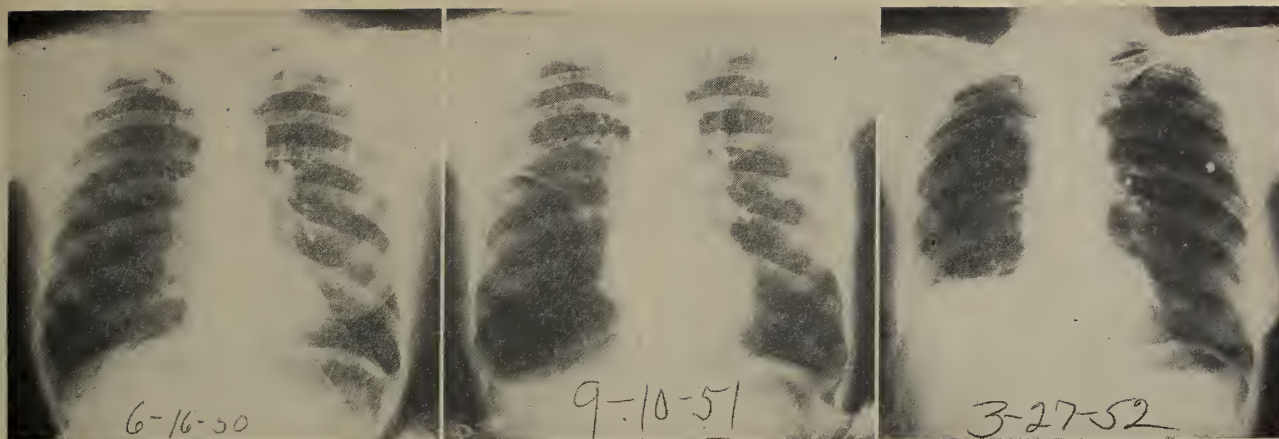


Figure 4.—(Left) Pneumothorax limited to the right lower lung field. (Center) More extensive pneumothorax with some atelectatic lung tissue along the right border of the heart. (Right) Film taken six months after decortication and right lower and middle lobectomy. Note good expansion of the remaining upper lobe.

cated mass at the right border of the heart which was thought to be collapsed lung tissue. The left lung field showed a Ghon's complex.

Penicillin was administered and the temperature became normal on the third hospital day. The sputum became clear and was greatly reduced in amount. Bronchoscopic examination was carried out on September 10. There was reddened, edematous mucosa throughout the right lower bronchial tree, and purulent secretions were aspirated from the middle and lower lobe bronchi. The secretions were negative for fungi and acid-fast bacilli on smear and concentrate, and no malignant cells were observed on cell block examination.

A previous photofluorogram dated January 6, 1950, showed the chest normal except for the Ghon's complex on the left, and an x-ray film of the chest dated June 16, 1950, showed pneumothorax limited to the right lower quadrant without evidence of tension or atelectasis (Figure 4).

On September 12, 1951, the patient was transferred to Mercy Hospital and eight days later right thoracotomy was performed with the patient in the face down position under endotracheal pentothal-nitrous oxide-ether anesthesia. The pleural cavity was not entered until most of the pleural peel over the lower chest wall and diaphragm had been decorticated. The pleural space was obliterated except in the lower half of the chest where pneumothorax was present. Both the middle and the lower lobes were observed to be completely airless. As the visceral peel was dissected away, the lower lobe remained atelectatic and shrunken but the middle lobe expanded normally. The upper lobe was normal to palpation, the middle lobe contained areas of crepitation and fibrosis, and the lower lobe was collapsed and fibrotic. The middle and lower lobes were consequently resected, the bronchial stump being closed with interrupted 4-0 silk sutures. The diaphragm, which had been inadvertently stripped from its chest wall attachment for a distance of 3 inches, was resutured to the chest wall and two intercostal drainage tubes were inserted. The chest was closed with silk.

Postoperatively bloody discharge and air drained from the intercostal tubes for four days, necessitating transfusion and the application of suction to the intercostal catheters. The catheters were removed on the fifth postoperative day and the patient was discharged on the eighth postoperative day. She gained strength and returned to normal activities in about three weeks. Except for repeated "chest colds" she remained asymptomatic thereafter.

On examination by the pathologist both lower and middle lobes showed purulent exudate and dilatation of the bronchi. The lower lobe was airless and the middle lobe aerated only partially.

The diagnosis was: (1) Chronic fibrous pleuritis; (2) chronic interstitial pneumonitis with bronchiectasis of the middle and lower lobes.

COMMENT ON CASE 2

In this patient the disease probably started with spontaneous pneumothorax secondary to a ruptured bleb. At that stage, aspiration, intercostal tube drainage or temporary phrenic paralysis might have resulted in expansion of the middle and lower lobes and prevented the onset of suppuration in them.

DISCUSSION

Various methods have been advocated in the treatment of chronic pneumothorax: (a) The use of irritants⁵ to aid in attaining pleural symphysis (silver nitrate,³ iodized talc,⁹ etc.); (b) thoracoscopy⁸ with lysis of adhesions, cauterization of blebs, or poudrage; (c) phrenic nerve interruption⁴; (d) closed (intercostal) catheter drainage² and (e) thoracotomy^{1, 2, 6, 7, 10, 11, 12} with excision of blebs, closure of fistulae, resection of diseased lung and decortication of the thickened peel (extrapleural lobectomy).

It is felt that in the two patients presented here anything short of thoracotomy, decortication and resection would have failed to obliterate the space and relieve the symptoms. The main indication for operation in both patients was pulmonary suppu-

tion rather than obliteration of the pneumothorax.

It is believed that total decortication of the pneumothorax pocket was advantageous from the technical as well as the therapeutic point of view.

In the first case it was debated whether to perform thoracoplasty with the intent of obliterating the space. In view of the operative finding of thick peel over the chest wall and upper mediastinum it is doubtful that it would have been successful.

In the second case a combination of closed intercostal drainage, phrenic nerve interruption and pneumoperitoneum was contemplated but considered contraindicated in view of the obvious pulmonary suppuration in the lower and middle lobes, because the chance of thus effecting relief of the attacks of fever, cough and expectoration seemed remote. Likewise the threat of empyema developing seemed great.

SUMMARY

The case histories of two patients with limited or localized chronic tension pneumothorax are presented. The cause of the pneumothorax in one case was probably suppurative pneumonitis with localized effusion and in the other probably rupture of an emphysematous bleb. In both patients total lobar collapse and suppuration were present and both were treated by complete decortication and resection of the involved lobes.

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Cortisone in Treatment of Trichinosis

JOSEPH F. SADUSK, JR., M.D., Oakland

WHILE TRICHINOSIS is generally regarded as a benign disease, it is well known that the clinical course may at times be quite severe; and indeed mortality rates of from approximately 3 to 6 per cent have been recorded.^{3, 6, 9}

Until very recently, the only recognized therapeutic procedure was that of bed rest and supportive medication. Scattered reports on the use of corticotropin (ACTH)⁴ and cortisone^{7, 8} indicate that these agents may be of considerable value in the treatment of trichinosis.

The purpose of this communication is to report the treatment of a case of trichinosis with cortisone, to show that this agent was most effective in the amelioration of symptoms, and to attempt to define the appropriate dosage of the drug.

REPORT OF A CASE

A 31-year-old traveling salesman was admitted to the hospital on the thirteenth day of illness with complaints of fever, chills, muscle aching and pain, sweats, severe frontal headache and swelling of the eyelids.

The illness began November 27, 1952, with a sudden severe chill and temperature rise to approximately 101° F. The patient then perspired profusely throughout the night. The next day he felt well and was essentially asymptomatic until December 2, at which time he noticed puffiness of the lower eyelids which rapidly spread in a day or so to the upper lids and finally involved the entire periorbital area. On December 5, the patient suddenly had another chill. The temperature rose rapidly, and there was muscle aching of a generalized nature but with particular severity in the anterior thigh muscles. On December 6 another severe shaking chill occurred and chills and aching of the muscles continued but the periorbital edema began subsiding slowly. Rather severe frontal headache developed. Temperatures ranged between 100.2° and 102.4° F. when he was admitted to hospital. There was no history of skin eruption or diarrhea.

The only infectious disease noted in the patient's history was measles. The patient, traveling by automobile throughout the rural districts of California, frequently ate inadequately cooked "hamburgers," possibly containing pork, at roadside stands.

Upon physical examination the patient was observed to be well developed and well nourished. He appeared acutely ill and prostrated. The temperature was 102.0°, the pulse rate 96, and the blood pressure 120/40 mm. of mercury. The skin was flushed, sweating and hot. No skin eruption was noted. There was a moderate tenderness of the anterior muscles of the thigh. The conjunctivae were clear. Moderate bilateral periorbital edema was

From the Medical Service, the Samuel H. Merritt Hospital, Oakland 9.

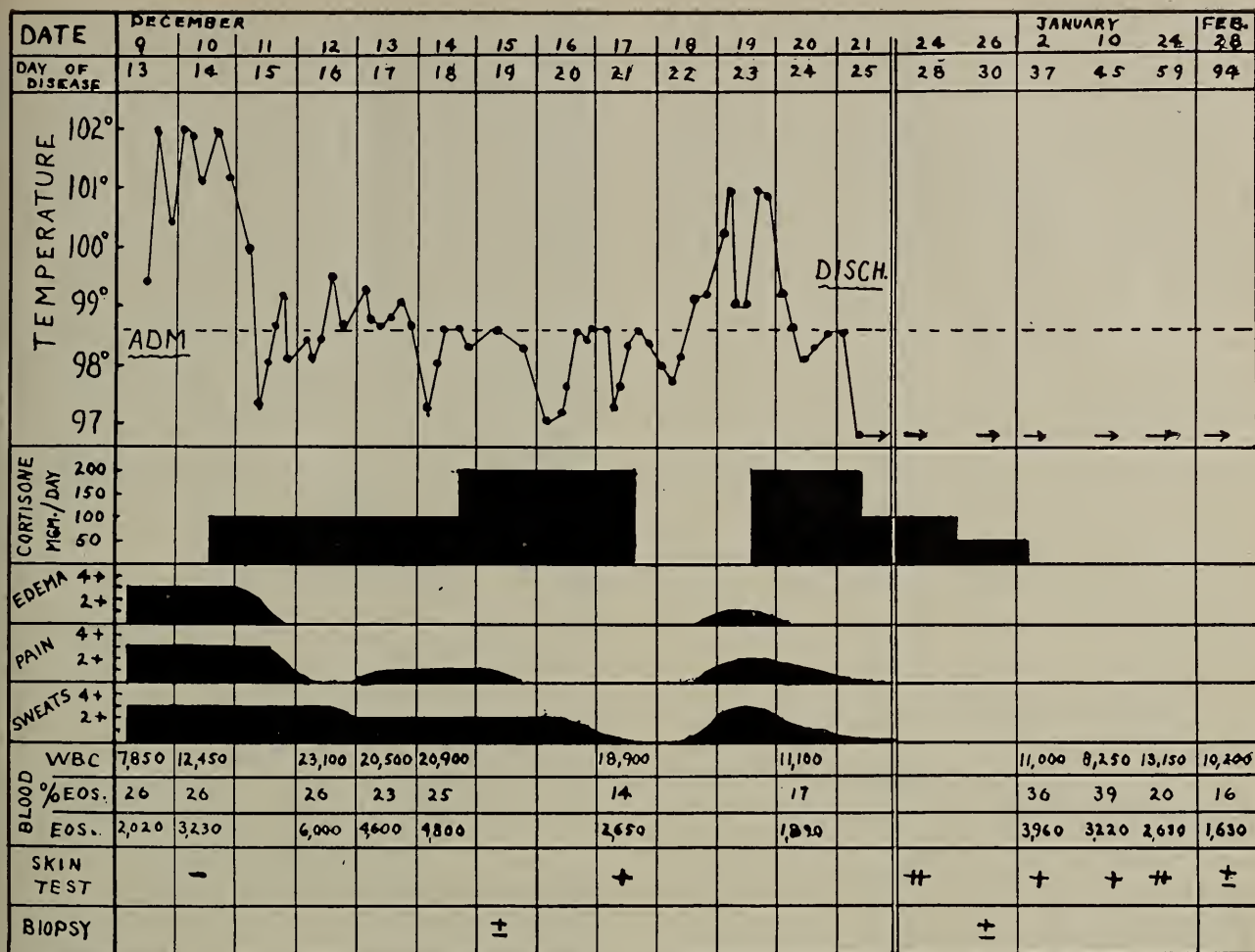


Chart 1.—Effect of cortisone in case of trichinosis.

noted. Pulsation was regular and bilaterally equal. The heart was not enlarged and there were no murmurs. The lungs were clear. The abdomen was soft and nontender and neither liver nor spleen was palpable. Deep reflexes were normal and equal, and there were no clinical signs of meningeal irritation.

Data on the subsequent course are shown in Chart 1. On admission, the following laboratory data were obtained. Erythrocytes numbered 4,470,000 per cu. mm. of blood and the hemoglobin content was 15.4 gm. per 100 cc. Leukocytes numbered 7,850 per cu. mm.—4 per cent nonsegmented neutrophils, 45 per cent segmented neutrophils, 20 per cent lymphocytes, 5 per cent monocytes and 26 per cent eosinophils. The urine was clear, with acid reaction, and the specific gravity was 1.020. It was negative for sugar and albumin. Centrifuge sediment showed only occasional granular casts. A culture of blood was sterile. Brucella agglutination was negative in a dilution of 1:20. The Widal reaction was as follows: B. typhosus 1:40 (H antigen) and negative (O antigen), B. paratyphosus A negative, and B. paratyphosus B 1:40.

The Weil-Felix reaction (Proteus OX19) was negative in a titer of 1:20. Skin tests with a 1:10,000 dilution of trichinella extract (Lederle) did not cause a wheal with either the control or the antigen.

After 24 hours during which fever and severe symptoms and signs of muscle pain, sweats and periorbital edema continued, cortisone therapy was started with a dosage of 25 mg. by mouth every 6 hours for a total of 100 mg. per day. Within 12 hours, the temperature began to fall rapidly and by the end of 24 hours the periorbital edema, prostration and muscle pain had disappeared, although night sweats continued in diminishing degree for another six days. When low grade fever began on the second day of therapy and continued for another 24 hours, cortisone was increased to 200 mg. per day in a dosage of 50 mg. every six hours. The temperature promptly dropped to normal limits and the patient continued quite asymptomatic.

On December 15, the nineteenth day of disease, specimens of tissue were removed* from the anterior thigh muscles for study. On routine examination of about 35 sections of the material† no encysted parasites were seen but there was a focal inflammatory reaction between the muscle fibers representing myositis and associated angiitis. There were no vascular changes suggestive of periarteritis. The entire block was sectioned and every tenth section was reviewed but still no Trichina were found.

* By Dr. Walter L. Byers of Oakland.

† By Drs. Charles Baker, Ruth Seale, and Bruno Gerstl of Oakland.

Finally, sections lying in approximation with sections of areas showing myositis were also studied and a fragment of a *Trichina* was discovered (Figure 1).

A skin test with trichinella antigen on the twenty-first day of disease revealed a faintly positive reaction with a blanched wheal 3 x 4 mm., without surrounding erythema, and the control was entirely negative. The eosinophil content of the blood slowly decreased as shown in Chart 1.

Cortisone was abruptly discontinued on December 17 (the twenty-first day of disease) in order to determine what therapeutic role this drug might have played. Within 24 hours, the temperature rose, reaching 101.0° F., and symptoms and signs of muscle pain, sweats and periorbital edema reappeared. Administration of cortisone was resumed in a dosage of 200 mg. per day. The response was again dramatic, with fall of temperature to normal and abatement of signs and symptoms. There was a further drop in the total eosinophil content to 1,890 cells per cu. mm.

The patient was finally discharged on December 21 (twenty-fifth day of disease) after 13 days of hospitalization. Convalescence was continued at home with a dosage of 100 mg. of cortisone per day (25 mg. every six hours). This dosage was continued until the twenty-ninth day of disease, following which a dosage of 50 mg. daily (25 mg. every 12 hours) was continued until the thirty-seventh day of disease.

A trichinella skin test using the same solution of antigen as before was repeated on the twenty-eighth day of disease and there was a moderately positive reaction, the wheal measuring 8 x 9 mm. with a small surrounding area of erythema. Biopsy from the deltoid muscle was repeated on the thirtieth day of disease, but again, while there was definite evidence of a myositis similar to that previously described for the first biopsy, no parasites were found in the muscle tissues on routine examination.

Data on the patient as an outpatient are shown in Chart 1. It will be seen that reaction to skin tests ranged between mild and moderate and that the eosinophil count rose to a value of 3,960 cells per cu. mm. when cortisone was discontinued, but subsequently fell so by the ninety-fourth day of disease the eosinophil count had fallen to 1,630.

It is perhaps pertinent to note that on the second hospital day an electrocardiogram revealed no abnormalities except for an unusually high degree of elevation of the ST segment in the Wilson unipolar precordial lead V-2 only. This was considered to be a borderline tracing. Electrocardiograms repeated seven days later and then after a two-week interval were normal, with no evidence of the ST segment elevation.

The patient was seen for the last time on July 6, 1953. The trichinella skin test reaction was quite negative. Leukocytes numbered 7,100 per cu. mm., with 6 per cent eosinophils, and the sedimentation

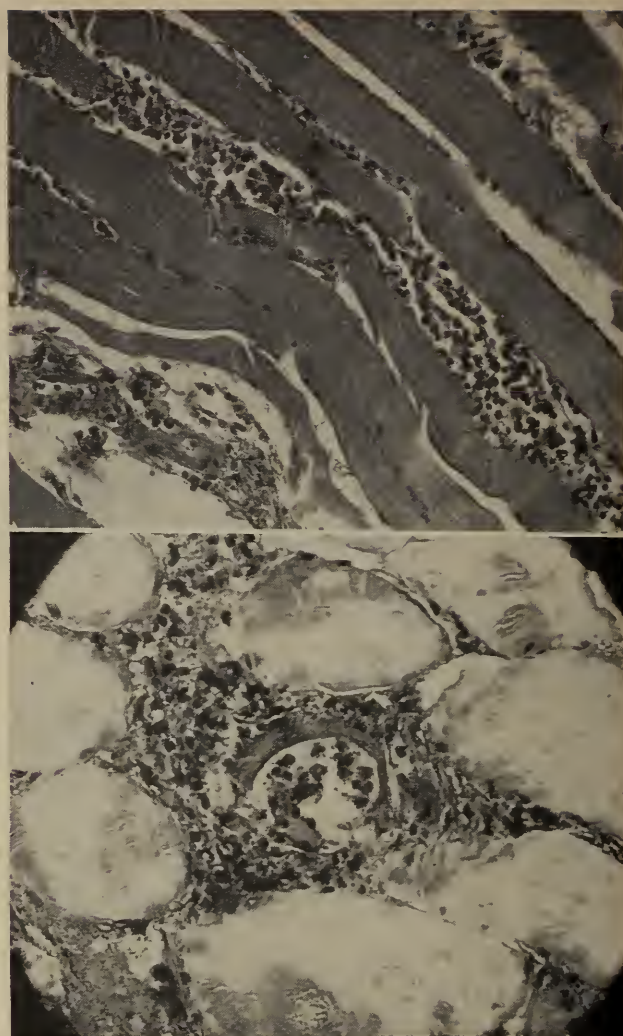


Figure 1.—Sections of anterior thigh muscle showing fragments of a trichina (upper) and associated myositis (lower).

rate was well within normal limits. The patient was in excellent health, as he had been for the preceding three months.

COMMENT

There is no doubt that cortisone had a beneficial effect upon symptoms during the acute stage of the disease. The drop in temperature, relief from prostration, disappearance of periorbital edema and muscle pain, and development of a feeling of well-being were most dramatic and essentially in accord with the few previous reports in the literature. That these changes were due to cortisone is evidenced by the reappearance of symptoms when the medication was abruptly stopped on the twenty-first day of disease and eventual clearing again with resumption of medication.

It would appear that a dose of 100 mg. of cortisone per day was ineffective since the patient continued to have low grade fever, muscle pain and sweats when that amount was given. When the dosage was increased to 200 mg. per day, however, these symp-

toms rapidly cleared. Treatment should doubtless be prolonged, probably for a period of from two to three weeks, although this point is not yet sufficiently clarified. In the three case reports previously noted,^{4, 7, 8} the use of corticotropin (ACTH) or cortisone was continued for from five to 18 days. It is likely that the duration of treatment depends upon the stage in which the disease is treated, with a longer period of therapy required for cases treated early in the disease.

The mechanism of action of corticotropin or cortisone in trichinosis—as well as in other diseases of bacterial or unknown origin—is not clear but probably depends upon an altered response between host and the infecting agent. In trichinosis, corticotropin and cortisone would appear to control the severity of disease until the larvae have become encysted and the host produces immune antibodies, thus rendering the disease clinically inactive.

It is clear from the studies of Luongo and co-workers⁴ that corticotropin had no specific effect upon trichinella larvae in experimentally infected guinea pigs. On the other hand, those investigators found a definite reduction in the toxic effects of the disease in animals treated with corticotropin together with a temporarily diminished eosinophilia and a significantly longer survival period. Treated animals that died did so only after corticotropin was discontinued, which points up the necessity for a long term period of treatment.

Two additional points warrant further discussion, namely, the difficulty of securing confirmation of the disease by positive biopsy and the role that repeated injections of trichinella antigen may play in producing positive skin tests.

It is obvious that the intensive study leading to the discovery of a *Trichina* in the first biopsy material in the present study is not practical and consequently one must ordinarily be content with the finding of myositis. This point has already received mention in the literature.¹

Whether or not repeated skin testing on several occasions with antigen will produce enough sensitivity to cause a positive skin reaction remains a

controversial point. The experience of McCoy and co-workers⁵ with repeated tests on control individuals indicates that the probability of sensitization is small; on the other hand, Baron and Brunner² showed that 56 per cent of test subjects had a positive reaction to skin test by the ninth test dose of *Trichina* antigen, and 33 per cent had sensitivity after three to six injections. Since it is unusual to persist in skin testing with trichinella antigen past two to three attempts, the importance of sensitization is rather minimal.

SUMMARY

Cortisone was efficacious in the treatment of a case of trichinosis insofar as the relief of signs and symptoms was concerned.

In the early and clinically active stage of the disease, apparently a dosage of 200 mg. daily of cortisone is required, with treatment continuing until the fourth or fifth week of disease in a diminishing dose down to 50 mg. per day.

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EDITORIAL

Antibiotics, Skill and Judgment

*"Of late, without the least pretence to skill,
Ward's grown a famed physician by a pill."*

WHILE BROWSING THROUGH some old books one evening not long ago we came upon the above satirical lines from Alexander Pope. Pope's life had been a continuous round of suffering with asthma, and, having failed to find relief in treatment by the accepted physicians of his day, he succumbed to the entreaties of friends and finally employed the notorious quack, "Spot" Ward, to prescribe for him. Ward, whose success as a quack had brought him a fortune, employed a "universal remedy"—a highly dangerous compound of antimony; but in Pope's case he was entirely unsuccessful save for inspiring the thought-provoking lines quoted above.

There are many today who employ the antibiotics as a "universal remedy" much as Spot Ward used antimony in 1744, and when health is restored the beneficence of Nature is misinterpreted as the physician's skill. This injudicious use of antibiotics not only breaks faith with our professional heritage but endangers the well-being of our patients and the educational attitudes of our developing physicians.

From the outset the dramatic nature of the antibiotic drugs led to unwarranted enthusiasm for their use. This attitude was not properly dissipated by the inevitable disappointment in any panacea, for each time a stable evaluation of a given antibiotic was about to be reached a newer drug of broader antimicrobial activity was optimistically heralded. The search for new antibiotics still goes on but each discovery makes it more difficult to find a new one that has any advantages over those already in use. The consequences and harmful effects from the indiscriminate use of antibiotics are becoming increasingly apparent as the populace of our nation receives in one form or another approximately 360 tons of

penicillin, 250 tons of streptomycin and 300 tons of tetracyclines and chloramphenicol yearly, not to mention erythromycin, neomycin and others. It has been estimated that at present less than 5 per cent of all antimicrobial drugs is administered on proper clinical indications. The rest is wasted on minor respiratory infections which are generally viral in origin and not susceptible to the administered antibiotic, on inconsequential infections on surface areas of the body, in illusory attempts at prophylaxis of bacterial infections, and in unnecessary combinations of drugs.

Jawetz¹ and Rantz² have classified the harmful results of the indiscriminate use of antibiotics into the following broad categories: (1) hypersensitivity and direct toxicity, (2) development of resistance of bacteria to antibiotics, and (3) the emergence of serious infections by organisms which were unknown previously or (4) "superinfection," presumably resulting from antibiotic-induced alterations in the normal body flora.

Hypersensitivity and direct toxic reactions can occur with any antibiotic agent. These reactions occur after either topical or systemic administration. Fortunately, most side effects are transient and subside when the offending agent is discontinued. Often-times this hypersensitive state has been produced by the unnecessary administration of antibiotics for an insignificant ailment, such as a cut, bruise, cold, abrasion, or minor surgical procedure; and subsequently the person who receives it for so little reason may have his welfare endangered because he cannot be given indicated antibiotic therapy at a time of serious need. Physicians must constantly guard against this misuse of invaluable agents.

Initially over 90 per cent of all strains of staphylococci were sensitive to even small doses of penicillin. At present, 50 to 90 per cent of pathogenic staphylococci, particularly those in and around hospital air

and dust, are resistant to penicillin. These same organisms have also rapidly become resistant to the tetracyclines and erythromycin. New antimicrobial agents are constantly being sought since mortality from staphylococcal sepsis has again risen inordinately as a result of unyielding bacterial resistance consequent to the unwarranted use of antimicrobial agents.

The emergence of serious infections by unknown organisms and the associated problem of "super-infection" are particularly noteworthy in the urinary, pulmonary and intestinal tracts. So common has this clinical entity become that it must always be suspected when the patient does not respond to antimicrobial therapy in the predicted fashion. The control of these secondary or superinfections often-times requires the closest cooperation between the clinician and the laboratory in defining the offending organism and finding a way to control it. Control of these difficult infections has led to further hazards in

antibiotic therapy, for physicians are tempted to use multiple antibiotic agents in such circumstances. It has been demonstrated that one antibiotic agent may actually diminish the effectiveness of another agent, and complex problems of bacterial antagonism and synergism result from injudicious use of antibiotic agents.

The time has come when physicians must take cognizance again of the laws of Nature in the control of infection and the development of immunity, and search out the true values of their skill, knowledge and judgment. The understanding of these laws will safeguard better the welfare of their patients than the indiscriminate use of the "antibiotic pill" or injection.

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Editorial Comment . . .

Problems of Research on Smog

TO SPEAK OF THE PROBLEMS and difficulties in medical research on smog seems to denote a rather negativistic approach. However, considering the nature of some of the comments in the press and some of the programs on radio and television, it appears that a recapitulation of the difficulties and problems and a wholesome balancing of our approach to the problem is quite in order. Much of the material in the press and on radio and television would lead us to believe that the whole problem can be simply solved by abolishing all the sources of smog. This is undoubtedly true but the improbability of accomplishment is great. The press, radio and television convey to the public only the information given them by the groups interested in smog abatement, both from the research angle and the administrative angle.

Due to the lack of coordinated effort and the lack of interchange of information, it appears as though each group would be entirely satisfied if only its specific problems were solved. As an example, if the substance in the atmosphere causing damage to the leafy vegetable crops could be removed, the agricultural group would apparently be satisfied. The same would be true of each group having a specific complaint, such as that the beautiful landscape is obscured, or that smog causes smarting of the eyes.

This seeming incoordination is undoubtedly due to the lack of communication and understanding between all groups. We in medicine have been remiss in not communicating with the other groups until recently. We must now bring before the public and the other groups the fact that smog presents many possible insidious effects on the health of the human being. Since we can point to no specific cases of death due to smog, nor to any new diseases caused by smog, nor to any terrifying physical defects caused by smog, it is extremely difficult to arouse enough interest in the public in general, in other groups interested in smog abatement, in our legislators and many times in our own medical profession to support any research in the field of medical effects of smog. To stimulate interest is one of the major problems, since the expense of research of the kind needed is comparatively great and full interest and support of all groups is of utmost importance. The great majority of the public outside of the medical profession will have to be informed and educated as to the need for medical research on the smog problem. Everyone agrees that research in the field of water pollution was, and still is, quite necessary and that it has paid off in stopping water-borne epidemics, in halting the poisoning of fish and game, and in many other ways. If it is possible to show the

public that research on air pollution can be as beneficial, or more beneficial, than a major hurdle will have been topped.

The difficulties encountered in the actual technical research portion of this problem are varied and numerous. The greatest difficulty is psychological in nature in that the research is rather dull and uninteresting because it takes considerable time and the results are not dramatic. The inhalation studies to determine maximal permissible concentration are expensive and tedious and at best take from 12 to 30 months for each pollutant studied. Unfortunately there are not many who will undertake research of this type.

Smog is a mixture of possibly hundreds of pollutants, some of them in the original state in which they were dumped into the atmosphere and others as new compounds formed as the result of chemical reactions occurring due to the presence of sunlight, ozone, oxides of nitrogen and other factors in the atmosphere. With this wide spectrum of pollutants, it becomes quite a problem to select the compounds most likely to cause deleterious effects on human health. After a compound has been selected for study, the problem of preparing it in a pure state arises; and as a further difficulty to plague the researcher, there are, for many of the compounds, no accurate methods of analysis of the minute quantities contained in air and animal tissue.

Another major difficulty experienced by persons interested in smog research is the appalling lack of what might well be classed as clinical material and clinical information. A somewhat generalized clinical relationship of human health to smog concentration might be obtained by cooperation of the prac-

ticing physician. A daily report of case loads of specific types, such as asthma and upper respiratory tract infections, could be correlated with the concentration of smog, as determined by the Air Pollution Control District. If the practicing physicians who report are objective and unbiased by personal feelings on the smog problem, it is logical to assume that statistical analysis of the reports, correlated with the smog analysis, would give some indication as to whether or not clinical information might be expected from a study of this kind.

Chemists, engineers, meteorologists and physicists have made great strides in determining many of the sources of smog, as well as in identifying many of its constituents. Much more work is necessary in these scientific fields, however, before a successful conclusion can be reached. Research has been started in the biological and medical fields in a number of places but, considering the magnitude of the problem, it is fair to say that in the field of medicine the surface has barely been scratched. Before the smog problem can truly be said to be conquered, biologists and medical men must supply information concerning the maximal permissible concentration of many or all of the constituents of smog. It is only from information of this kind that teeth can be fashioned for the laws regulating air pollution. The necessary research in this field can be begun and prosecuted only if full support and interest, both moral and financial, are given by everyone—most of all the researchers' colleagues in the field of medicine.

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LETTERS to the Editor . . .

September 27, 1954

YOUR RECENT EDITORIAL [September 1954] on multiphasic surveys is good, but does not get to one of the roots of the evil. This is the manner in which our profession is exploited by the persons conducting the survey. For example, in the Los Angeles survey to which you refer, the fee paid to physicians for interpreting the chest x-rays was 5 cents per film.

We train a physician in medicine for eight years, then send him through internship and often a three-year residency. After twelve such years of training he attempts to go into practice. He finds various agencies and groups conducting mass surveys, and the fee which he is accorded for rendering a diagnostic conclusion as to the presence or absence of significant shadows in a chest film is 5 cents! It matters not that the film is small; it still takes time, medical judgment and ability to determine the presence or absence of significant shadows.

We do not know what fee is accorded the physicians who read the electrocardiograms; perhaps they get 10 cents per electrocardiogram. And what is paid the physician supervising the vision, blood serum or hemoglobin tests?

In what other field of human endeavor are such small fees accorded to professional persons? This is all very well for the group, but distinctly unreasonable for the physician.

Finally, the advocates of preventive medicine would have mass cytology surveys for cancer of the cervix; mass surveys of the stomach for carcinoma; mass surveys for diabetes and for other non-communicable diseases. As you stated, the actual yield in cases detected by such surveys is extremely small; the number of patients who take the necessary steps to correct the condition (if actually confirmed) is notoriously low.

Meantime, physicians are asked to contribute their services to these programs either gratis or at a wage totally inadequate for the labor performed. The result is indifferent survey work and no true gain in public health.

Yours sincerely,

M. MASTERSON, M.D.

1 1 1

IN THE AUGUST ISSUE of CALIFORNIA MEDICINE, final paragraph, first column, page 105, the statement is made that in Riverside County the C.P.S. income ceiling was eliminated, as was done in San Pedro.

This statement is not quite correct: the income ceiling for C.P.S. in Riverside County is still \$4,200. The \$6,000 ceiling has been discussed and is now under consideration, but no change has been made.

Mention of this is made only to make sure our position here is clearly and accurately presented.

Sincerely yours,

ROBERT MARVIN

Business Secretary

Riverside County Medical Association

1 1 1

THE EDITORIAL, Volume 81, No. 3, page 240, September 1954, on Multiphasic Surveys: Streamlined Diagnosis for the Public, is one of the best summaries of this so-called Public Health endeavor.

Because of the fair and complete evaluation of this technique or program, we are interested in obtaining additional copies to be used for teaching purposes....

Sincerely,

L. S. GOERKE, M.D.

Department of Public Health and

Preventive Medicine

School of Medicine

University of California

Los Angeles 24

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 408th Meeting of the Council of the California Medical Association, San Francisco, October 3, 1954.

The meeting was called to order by President Morrison, in the absence of Council Chairman Lum and Vice-Chairman Heron, in Room 210 of the St. Francis Hotel, San Francisco, at 9:30 a.m., Sunday, October 3, 1954.

Roll Call:

Present were President Morrison, President-Elect Shipman, Vice-Speaker Bailey, Secretary Daniels, Editor Wilbur and Councilors West, Wheeler, Sampson, Pearman, Ray, Sherman, Bostick, Teall, Frees, Carey, Kirchner, Reynolds and Varden. Absent for cause, Speaker Charnock, Councilors Lum, Loos, Randel and Heron.

A quorum present and acting.

Present by invitation during all or part of the meeting, Messrs. Hunton, Thomas, Gillette and Clancy of C.M.A. staff, Howard Hassard, legal counsel; Ben H. Read and Eugene Salisbury of the Public Health League of California; county society executive secretaries Pettis of Los Angeles, Foster of Sacramento, Nute of San Diego, Thompson of San Joaquin, Wood of San Mateo and Donovan of Santa Clara; Mr. K. L. Hamman of California Physicians' Service; Mr. Rollen Waterson, health insurance consultant; Dr. Malcolm Merrill, State Director of Public Health; Dr. D. H. Murray, legislative chairman; Drs. Lewis T. Bullock, Paul Hoaglund and Robert L. Smith, Jr., of the California Society of Internal Medicine, and Drs. J. Norman O'Neill, Herbert L. Joseph, J. W. Green, Burt Davis, Hunter Brown, A. E. Larsen, Edwin L. Bruck, Dan O. Kilroy and Francis J. Cox.

1. Minutes for Approval:

(a) On motion duly made and seconded, minutes of the 406th meeting of the Council held in Los Angeles May 8-12, 1954, were approved.

(b) On motion duly made and seconded, minutes of the 407th meeting of the Council held in Los Angeles May 12, 1954, were approved.

(c) On motion duly made and seconded, minutes of the 344th meeting of the Executive Committee, held in San Francisco July 10, 1954, were approved.

2. Membership:

(a) A report of membership as of October 1, 1954, was received and ordered filed.

(b) On motion duly made and seconded, 103 delinquent members whose dues had been paid were voted reinstatement.

(c) On motion duly made and seconded in each instance, 15 applicants were voted Retired Membership. These were: Wm. Whitfield Crane, Alameda-Contra Costa County; Jacob Abowitz, Burrell O. Raulston, Los Angeles County; Marie Boehm, Napa County; Bert W. Hardy, R. J. van Wagenen, Orange County; Herbert S. Anderton, George W. Getze, Merrel H. Taylor, San Diego County; Elbridge J. Best, Robert Lorentz, Mary Jones Mentzer, Emily Woelz, San Francisco County; and Edith E. Johnson and Clyde Wayland, Santa Clara County.

(d) On motion duly made and seconded in each instance, 51 applicants were voted Associate Mem-

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WILBUR BAILEY, M.D.	Vice-Speaker
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bership. These were: W. E. Allen, H. S. Colony, D. K. Dudderar, Irving Fien, P. L. Livingston, James V. Roche, Erich Spiro, Anton A. Tratar, Alameda-Contra Costa County; Philip G. Beal, Merl J. Carson, Emanuel Cohen, W. E. Compere, Jr., Charles L. Corley, William A. Craig, Mary B. Dale, J. E. Englehardt, John R. Evans, Wm. G. Figueroa, Arthur F. Gardner, Hyman W. Giersen, Mildred Healey, James Irvine, George Kalmansohn, Herbert Lamont, Nicholas M. Langer, Melvin H. Levin, Louis Lunskey, Isidore Matilsky, Thomas Miller, Lewis B. Newman, Irving Nissenbaum, Robert B. Parker, A. H. Parmelee, Jr., Harry W. Perrin, A. F. Rasmussen, Jr., Marvin M. Schroeter, Jullien L. Smith, Robert S. Stone, Grace I. Walla, Byron M. Walls, Warner R. Wright, Angela R. Young, Los Angeles County; Len H. Andrus, Monterey County; Ralph F. Waddell, Riverside County; Bertram E. Marks, San Diego County; Margaret Carlsmith, Lillian Cottrell, Raymond E. Ponath, San Francisco County; H. D. Chope, San Mateo County; Lydia Verbar, Santa Clara County; and Thomas L. Gore, Ventura County.

(e) On motion duly made and seconded, 33 applicants were voted a reduction of dues because of illness or postgraduate study.

3. *Financial:*

A report of bank balances as of October 1, 1954, was received and ordered filed.

4. *Legal Department:*

Howard Hassard, legal counsel, discussed the California State Supreme Court decision in litigation in which the Association has been interested, together with possible applications of this decision by others than the original parties in the case.

On motion duly made and seconded, three statements from San Diego for legal and court costs in this case, totaling \$4,844.61, were approved for payment.

5. *Medical Services Commission:*

(a) Dr. Hollis Carey, chairman of the Medical Services Commission, reported that the Commission had asked its fee schedule subcommittee to develop a fee schedule for use by California Physicians' Service to cover contracts written under a \$6,000 income ceiling. This schedule was approved by the Executive Committee of the Commission and by the Executive Committee of the Association and has been turned over to C.P.S. for use in the event it is needed.

(b) The Commission has selected Santa Clara and Riverside counties as pilots for a study to determine the aggregate cost of training physicians, an economic study approved by the House of Delegates. On motion duly made and seconded, an appropriation of \$4,000 was approved for this purpose.

(c) The Commission has worked out three proposed fee schedules for California Physicians'

Service. These are (1) a schedule for new contracts to be written under the \$4,200 income ceiling; (2) a schedule for contracts written under a \$6,000 income ceiling; and (3) a schedule to apply to members whose income falls between \$4,200 and \$6,000. These are considered temporary schedules pending completion of the relative value fee study. The new schedules have removed some of the inequities which have been criticized by specialists in internal medicine.

On motion duly made and seconded, and with an amendment requested by the internists through Dr. Lewis T. Bullock, it was voted to approve the proposed \$4,200 fee schedule and transmit it to the Board of Trustees of C.P.S.

(d) On motion duly made and seconded, it was voted to appropriate \$15,000 for the cost of the relative value fee study.

(e) Mr. Waterson, at the request of Dr. Carey, reported on the failure of insurance representatives to sell contracts in East Contra Costa and Alameda counties on the basis of indemnities identified with usual fee tables. He also discussed the differences between fee schedules based on C.P.S. membership with incomes between \$0 and \$6,000 and a dual schedule to cover those up to a \$4,200 ceiling and those between \$4,200 and \$6,000.

After considerable discussion, it was moved, seconded and voted to recommend to the Trustees of California Physicians' Service that dual income ceilings of \$4,200 and \$6,000 be established, with due structures and fee schedules in consonance.

It was regularly moved, seconded and voted that the proposed fee schedule of the Medical Services Commission, to cover those between the \$4,200 and the \$6,000 income ceilings be approved for presentation to the C.P.S. Board of Trustees, with the understanding that this schedule was for interim use and was subject to modifications which the C.P.S. Trustees might make.

6. *Committee on Scientific Work:*

(a) Dr. Albert C. Daniels, chairman of the Committee on Scientific Work, asked authority to schedule the 1955 Annual Session on the days of May 1 to 4, inclusive, and to hold scientific meetings during the sessions of the House of Delegates. On motion duly made and seconded, this authority was granted.

(b) The committee recommended that the transportation expenses of the wives of invited guest speakers be met by the Association. On motion duly made and seconded, this expense was approved.

7. *California Medicine:*

(a) On motion duly made and seconded, it was voted to appoint Dr. Eugene S. Hopp to the Committee on Advertising, to succeed Dr. Robert C. Martin, resigned.

(b) On motion duly made and seconded, it was voted to appoint Dr. John D. Camp, Los Angeles, to the Editorial Board, Section on Radiology, to succeed Dr. John Crossan, resigned.

(c) On motion duly made and seconded, it was voted that advertising offered for publication should be adjudged on its own merits, regardless of the ownership of the producing company.

(d) On motion duly made and seconded, it was voted to permit the use of all or part of the mailing list by the Committee for Postgraduate Medical Education of the Alameda-Contra Costa Medical Association.

8. *Subsidized Medical Practice:*

Drs. J. Norman O'Neill and Hunter Brown discussed a series of items bearing on the subsidization of medical practice in state-owned institutions, together with other programs undertaken in the same areas. On motion duly made and seconded, it was voted to refer this material to the Executive Committee, which is to have power to take appropriate action.

9. *California Physicians' Service:*

Mr. K. L. Hamman reported that the beneficiary membership of California Physicians' Service was 649,025 as of last August 31, an increase of about 11 per cent in the past year. He also gave a report on the current activities of C.P.S.

10. *Public Policy and Legislation:*

(a) Dr. Dwight H. Murray, legislative chairman, reported on a meeting with representatives of the State Department of Mental Hygiene, who suggested the establishment of clinics jointly financed by state and local funds, in areas of 50,000 or more population, for screening mental hygiene cases. The committee does not believe this type of legislation should be supported.

(b) Dr. Murray also reported on a proposed bill by the State Department of Public Health for the control of rabies, a measure which the committee wishes to support as a public health move.

(c) Dr. Murray asked that a letter be sent to the county society secretaries, urging them to bring to the Association any suggestions for proposed legislation, rather than working at the county level. It was agreed that this be done.

(d) Mr. Ben H. Read, executive secretary of the Public Health League of California, introduced his new associate, Mr. Eugene Salisbury, and urged a complete vote at the November 2 elections.

(e) Mr. Hassard discussed the current situation relative to physical therapy, in which field two legislative enactments have become effective and have created some confusion.

11. *Rural Health:*

A communication from the A.M.A. Council on Rural Health, relative to medical care for indigents, was received and ordered referred to the Medical Services Commission for consideration.

12. *Physicians' Benevolence Committee:*

Discussion was held on the possibility of converting the Physicians' Benevolence Committee into a nonprofit corporation which could qualify legally as a charitable fund exempt from the requirement of collecting entertainment taxes on benefit performances by auxiliary chapters or others. On motion duly made and seconded, Mr. Hassard was authorized to proceed in this direction.

13. *Audio-Digest Foundation:*

A report from Dr. Edward C. Rosenow, Jr., Editor of Audio-Digest Foundation, was presented and ordered filed.

14. *Public Relations:*

Mr. Ed Clancy reported on the current activities of the public relations department and pointed out that more than 2,300,000 pieces of literature have been distributed to physicians to give to their patients.

Mr. Clancy also suggested the formation of a special committee to investigate the use of narcotics, especially by minors. On motion duly made and seconded, it was voted to refer this matter to the Executive Committee.

15. *Blood Bank Commission:*

Mr. Hunton reported on the plans of the Fresno County Medical Society for establishment of a blood bank to become part of the C.M.A. system. The Executive Committee had previously approved a loan of \$50,000 to the county society for this purpose.

16. *State Department of Mental Hygiene:*

It was agreed to cooperate with the California State Department of Mental Hygiene in a review and study of the problems of alcoholism.

17. *Medical Education:*

Report was made that the \$100,000 appropriated to the American Medical Education Foundation had been forwarded and that the deans of several dozen medical schools had written their profound thanks for their share of this contribution.

18. *Medical Assistants:*

A request from an organization of medical assistants for the naming of several Association members as advisory committee members was received. It was agreed to suggest that the standing Committee on Associated Societies and Technical Groups be named in this capacity.

19. General Practitioner of the Year:

A proposal was received to nominate Dr. H. Bernard Graeser of Holtville for consideration by the A.M.A. as the General Practitioner of the Year. On motion duly made and seconded, it was voted to make this nomination.

20. Conference of Physicians and Schools:

On motion duly made and seconded, it was voted to appropriate \$2,500 to cover the cost of the Conference of Physicians and Schools to be held in Fresno November 12 and 13, 1954.

21. Time and Place of Next Meeting:

It was agreed to leave the time and place of the next Council meeting in the hands of the Executive Committee.

Adjournment:

There being no further business, the meeting was adjourned at 5:30 p.m.

A. A. MORRISON, *President*

Acting Chairman

ALBERT C. DANIELS, *Secretary*

Krebiozen Again

A statement by the Cancer Commission of the California Medical Association

CANCER "CURES," like poison ivy, have a way of recurring. The "Krebiozen Research Foundation of Chicago" has recently recircularized the profession with:

"A Report on Krebiozen—An Agent for the Treatment of Cancer."

The Cancer Commission of the California Medical Association has received several inquiries concerning this report, especially since the name of Dr. Andrew Ivy is prominently displayed therein. The Cancer Commission is unable to report, on the basis of the available facts, any objective evidence of benefit in cancer with this so-called drug.

The following reports have appeared in the recent past:

1. "A Status Report on Krebiozen," Council on Pharmacy and Chemistry, American Medical Association, J.A.M.A., 147:864, October 27, 1951.

2. Opinion of the Committee on Cancer Diagnosis and Therapy of the National Research Council, M. D. Winternitz, M.D., Chairman, Division of Medical Sciences, J.A.M.A., 147:1297, November 24, 1951.

3. Schmitz, H. E., and Smith, C. J.: Primary treatment of cervical carcinoma with "Krebiozen," J.A.M.A., 148:843, March 8, 1952.

4. Szukewski, H. A.: Krebiozen in treatment of cancer, J.A.M.A., 148:929, March 15, 1952.

5. Loefer, J. B.: Ineffectiveness of "Krebiozen" therapy on transplanted mouse leukemia and lymphosarcoma, J.A.M.A., 149:298, May 17, 1952.

The essence of these reports is that this drug "obtained from horse serum" was used on a large number of patients with cancer by a number of responsible clinicians with wide experience in cancer therapy. Examination of the surgical and autopsy specimens of treated patients revealed no significant changes in cell structure or tumor architecture. There was no significant evidence of objective regression of cancer. There is no scientific evidence that Krebiozen has a beneficial effect in human cancer.

In Memoriam

AUSTIN, FLORENCE O. Died in Ukiah, September 20, 1954, aged 61. Graduate of Rush Medical College, Chicago, Illinois, 1919. Licensed in California in 1920. Doctor Austin was a member of the Los Angeles County Medical Association.



BREUER, ROLAND G. Died in San Jose, June 22, 1954, aged 59, of lobar pneumonia. Graduate of the University of Nebraska College of Medicine, Omaha, Nebraska, 1919. Licensed in California in 1927. Doctor Breuer was a member of the Santa Clara County Medical Society.



DOANE, FRANK L. Died in Crescent City, September 2, 1954, aged 81, of coronary thrombosis. Graduate of the Cooper Medical College, San Francisco, 1903. Licensed in California in 1903. Doctor Doane was a member of the Tehama County Medical Society, a life member of the California Medical Association, and an associate member of the American Medical Association.



McKELLAR, JAMES H. Died in Pasadena, September 9, 1954, aged 71, of coronary artery disease. Graduate of the University of Southern California School of Medicine, Los Angeles, 1905. Licensed in California in 1905. Doctor McKellar was a member of the Los Angeles County Medical Association.



McKENNEY, JAMES A. Died in Yosemite, October 3, 1954, aged 76, of coronary artery disease. Graduate of St. Louis University School of Medicine, Missouri, 1914. Licensed in California in 1914. Doctor McKenney was a member of the Alameda-Contra Costa Medical Association.



RIJHOFF, VICTOR E. Died in San Francisco, September 20, 1954, aged 50, of carcinoma of the stomach. Graduate of St. Louis University School of Medicine, Missouri, 1933. Licensed in California in 1934. Doctor Rijhoff was a member of the San Francisco Medical Society.



RUTH, ROY F. Died in Woodlake, September 11, 1954, aged 61, of pulmonary embolism. Graduate of the College of Physicians and Surgeons, Los Angeles, 1917. Licensed in California in 1917. Doctor Ruth was a member of the Tulare County Medical Society.

CALIFORNIA MEDICAL ASSOCIATION

Annual Meeting

SAN FRANCISCO

May 1-4, 1955

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) not later than November 20, 1954.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association not later than December 1, 1954. (No exhibit shown in 1954, and no individual who had an exhibit at the 1954 session, will be eligible until 1956.)

Medical Motion Pictures

Applications are now being received for the program of the Medical Motion Pictures Section. Please submit your application to Arthur E. Smith, M.D., Chairman, Medical Motion Pictures Section, 1930 Wilshire Boulevard, Los Angeles 57, California.

SCIENTIFIC PAPERS
SCIENTIFIC EXHIBITS
MEDICAL MOTION PICTURES
PLANNING MAKES PERFECT
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SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY Ben C. Eisenberg
2680 Saturn Avenue, Huntington Park

ANESTHESIOLOGY John P. Howard
2558 4th Avenue, San Diego 3

DERMATOLOGY AND SYPHILOLOGY . R. Raymond Allington
3115 Webster Street, Oakland 9

EYE, EAR, NOSE AND THROAT—

ENT Francis A. Sooy (Chairman)
490 Post Street, San Francisco 2

EYE Robert N. Shaffer
490 Post Street, San Francisco 2

GENERAL MEDICINE Roger O. Egeberg
Wadsworth General Hospital, Los Angeles

GENERAL PRACTICE Stanley R. Parkinson
326 G Street, Marysville

GENERAL SURGERY Lyman A. Brewer, III
2010 Wilshire Boulevard, Los Angeles 57

INDUSTRIAL MEDICINE AND
SURGERY Homer S. Elmquist (Asst. Secretary)
629 S. Westlake, Los Angeles 57

OBSTETRICS AND GYNECOLOGY George Judd
2010 Wilshire Boulevard, Los Angeles 57

PATHOLOGY AND BACTERIOLOGY Orlyn B. Pratt
312 North Boyle Avenue, Los Angeles 33

PEDIATRICS Milo B. Brooks
1015 Gayley Avenue, Los Angeles 24

PSYCHIATRY AND NEUROLOGY Knox H. Finley
450 Sutter Street, San Francisco 8

PUBLIC HEALTH E. M. Bingham
130 South American, Stockton

RADIOLOGY Merrell A. Sisson
450 Sutter Street, San Francisco 8

UROLOGY Wilson Stegeman
1166 Montgomery Drive, Santa Rosa



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

LEADERSHIP IN COMMUNITY HEALTH

Leadership in Community Health is the theme chosen by our national president, Mrs. George Turner of El Paso, Texas. In speaking of the responsibility of every physician's wife to her own home community, Mrs. Turner says: "The achievements of American medicine are unparalleled and our pride in them is justifiable. However, we must realize that the appreciation of the public is not based on excellent medical care alone, but is in ratio to our devotion to the welfare of the community through Health Education and Community Health Service. It is in this unobtrusive, daily relationship between the doctor and his patients, and the doctor's wife and her contacts, that confidence in our sincerity and ability as leaders in community health is established."

Individually and as Auxiliary members, our doctors' wives in California are giving of their time, money and talents to such organizations as the American Cancer Society, the Red Cross, Community Blood Banks, the Heart Association, Crippled Children's Society and other voluntary health agencies.

* * *

SAN BERNARDINO HAS REVOLVING LOAN FUND

One of the major projects of the Auxiliary in San Bernardino County is the revolving loan fund established to help student nurses. By next year, there will be six trainees using this fund, the money for which is earned by the gala Holiday Ball in November of each year.

During the five years of its existence, the San Bernardino Auxiliary has doubled in size and has won a reputation for active participation in community health activities. The president this year is Mrs. Gordon W. Hodges.

* * *

PLACER-SIERRA-NEVADA AUXILIARY AIDS CANCER FUND

Only four years old, the Placer-Sierra-Nevada Auxiliary has chalked up a fine record of achievements in worthwhile community work. High on its list of major projects is the Cancer Fund Drive, to which the members give generously of their time and money. Another big project of this energetic group

is Nurse Recruitment and the Student Nurses' Fund. Mrs. David Kindopp assumed the presidency in June, replacing Mrs. Saul Ruby, who moved to San Jose.

* * *

GENEROUS CONTRIBUTIONS FROM HUMBOLDT COUNTY

The Auxiliary in our northernmost organized county, Humboldt, has been unusually successful in fund-raising projects. Last year, its annual Christmas Ball netted \$940, enabling the Auxiliary to expand its program of nursing scholarships. The members hope that the girls who take training will return to Humboldt County when they graduate to help relieve the acute shortage of trained nurses.

Another successful spring benefit, a card party every April, raises a generous donation to the American Cancer Society. President of the Humboldt Auxiliary this year is Mrs. Garvin Goble of Fortuna. Another of the members, Mrs. Theodore Poska, is state chairman of Public Relations.

* * *

FALL CONFERENCE WELL ATTENDED

A record attendance of 107 at the annual Fall Conference of state officers and chairmen and county presidents and presidents-elect at the Highlands Inn near Carmel during the last week of September is an indication of the steady growth of the Woman's Auxiliary in numbers and in enthusiasm. The agenda was long, and filled with panel discussions, reports and group participation.

A very valuable contribution to the conference was the discussion by Mr. Robert Huber of the firm of Peart, Baraty and Hassard, legal counsel for the California Medical Association, who told the Auxiliary members about admission taxes on their fund-raising benefits, and how to determine which beneficiaries are tax-exempt.

Another guest speaker was Mrs. Earl Shoesmith, of the State Office of Civil Defense. Our honored guest at the conference was our national president, Mrs. George Turner of El Paso, who outlined the aims and objectives of the Auxiliary for the year, stressing "Leadership in Community Health" as the theme.

MRS. FREDERICK J. MILLER, *President*

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

The one hundred twenty-first meeting of the American Association for Advancement of Science will be held December 26 to 31, 1954, on the campus of the University of California in Berkeley.

LOS ANGELES

The City of Los Angeles Department of Public Health is seeking qualified physicians to fill seven positions now vacant. Dr. George M. Uhl, city health officer, announced recently. The positions are: director of district health services, salary \$10,104 to \$12,576 a year; a director and an assistant director of the tuberculosis division and a director of communicable disease control, at salaries of from \$8,124 to \$10,102; a central laboratory assistant director at \$6,900 to \$8,680; and a virologist, the salary to be based on the background and experience of the applicant.

Candidates from any part of the United States may communicate with Dr. Uhl at 111 East First Street, Los Angeles.

SAN FRANCISCO

The program for a meeting of the Northern California Rheumatism Association to be held Friday, December 3, at 8:00 p.m. in Toland Hall, University of California Medical Center, San Francisco, follows:

An Improved Uric Acid Determination with Uricase—Thomas Feichtmeir, M.D., and Harold Wrenn, Ph.D.
Ratio of Reduced to Total Glutathione in Rheumatic Diseases—William C. Kuzell, M.D., Peter Koets, Ph.D., Guy Pierre Gaudin, M.D., R. W. Schaffarzik, M.D., and W. Edward Naugler, M.D.

Protective Effect of Diethylenediamine (Piperazine) against Phenylbutazone Toxicity in Mice, Guy Pierre Gaudin, M.D., B. Brown, M.D., E. A. Mankle, M.D., and William C. Kuzell, M.D.

Metabolic Effects of Fluorohydrocortisone Compared with Hydrocortisone—R. H. Orr, M.D., V. Di Raimondo, M.D., and Peter H. Forsham, M.D.

Excretion of Corticoids in Patients with Collagen Disease—George Michaels, Ph.D., Estuko Osawa, A.B., and Laurance W. Kinsell, M.D.

Metabolic Observations in Patients Receiving Long Term Therapy with Cortisone—E. W. Fredell, M.D., Harold Johnson, M.D., Marcus A. Krupp, M.D., and Ephraim P. Engleman, M.D.

Bone Resorption in a Case of Psoriasis and Arthritis—Roland Davison, M.D.

The Sequelae of Rheumatic Fever in Men—Leo Hollister, M.D., Felix Kolb, M.D., and Ephraim P. Engleman, M.D.

Fellowships in hematology will be available for appointment July 1, 1955, at Stanford University Hospital and the Veterans Administration Hospital, San Francisco. The fellowships carry a stipend and are subject to renewal for the following year. The San Mateo County Heart Association is assisting in establishing a fellowship in cardiology at the Veterans Hospital. This fellowship also carries a stipend and is subject to renewal.

* * *

Dr. Karl F. Meyer, director emeritus of the Hooper Foundation at the University of California Medical Center, San Francisco, has received the Borden Award in the Medical Sciences for 1954.

The high award for scientific research consists of \$1,000 for scientific research and a gold medal. Awards are given in several fields. Dr. Meyer was cited for his pioneering research in plague, psittacosis, and other epidemic diseases.

SAN MATEO

Dr. Frances Baker of San Mateo was elected secretary of the American Congress of Physical Medicine and Rehabilitation at the annual meeting held in Washington, D. C., in September.

SANTA CLARA

Dr. G. M. Byington of San Jose, formerly a U.S. Public Health Service Surgeon, recently became public health physician in the Palo Alto office of the Santa Clara County Department of Public Health.

TULARE

Dr. Elmo Zumwalt, medical director of Tulare County Hospital, recently was appointed acting county health officer to take the place vacated by the resignation of Dr. Donald Williams. Dr. Williams, who had taken over the post last spring, resigned to resume the study of medicine at Harvard.

GENERAL

The Sixth American Congress on Obstetrics and Gynecology will be held in the Palmer House, Chicago, December 13-17, under the auspices of The American Committee on Maternal Welfare, Inc., and The American Academy of Obstetrics and Gynecology.

The program, designed for physicians, nurses, public health officials and hospital administrators concerned with mother and baby care, will include approximately 30 formal papers, 22 symposia and panels, luncheon discussion groups and round-table discussions. Scientific and technical exhibits will present the latest developments in the field.

* * *

The eighth annual meeting of the Western Society for Clinical Research will be held January 28 and 29, 1955, at Carmel, California.

Information regarding the meeting may be obtained from Dr. Herbert N. Hultgren, secretary, at Stanford Hospital, San Francisco 15.

* * *

The American Goiter Association has again offered the Van Meter Prize Award of \$300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will

be held in Oklahoma City, Okla., April 28, 29 and 30, 1955, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English, and a typewritten double spaced copy in duplicate sent to the Secretary, John C. McClintock, M.D., 149½ Washington Avenue, Albany, New York, not later than January 15, 1955.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Fall schedule:

Dermatology in General Practice—November 10 to December 15, 1954.

In Long Beach:

Office Gynecology—January 6, 13, 20, 1954.

Contact: Mrs. Margaret H. Griffith, Assistant Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California.

Children's Hospital Seminars, Hematology, October 23, 1954; Orthopedic Problems of Infancy and Childhood, December 4, 1954; The Management of Metabolic Disturbances Commonly Encountered in Practice, January 22, 1955; The Allergic Dilemma, February 26, 1955; Infections and Their Management, March 26, 1955. Accreditation by the Board of General Practice has been granted. Gertrude F. Jones, M.D., Chairman, Medical Alumni Committee, Children's Hospital, 3700 California Street, San Francisco 18.

CALIFORNIA MEDICAL ASSOCIATION, POSTGRADUATE ACTIVITIES

A Circuit Course of Postgraduate Lectures will be given in the Sacramento Valley cities of Dunsmuir, Chico, Marysville, and Auburn, during the fall months of 1954. Lecturers are from the faculty of Stanford University Medical School. The weeks of November 15 to 19, Antibiotics, Dr. Lowell A. Rantz; December 6 to 9, Practical Problems in Clinical Endocrinology, Dr. Francis Greenspan.

CALIFORNIA MEDICAL ASSOCIATION, POSTGRADUATE ACTIVITIES INSTITUTES

SOUTHERN COUNTIES—Arrowhead Springs—January 27-28, 1955.

NORTH COAST COUNTIES—Santa Rosa—February 3-4, 1955.

WEST COAST COUNTIES—Santa Barbara—February 17-18, 1955.

SAN JOAQUIN VALLEY COUNTIES—Yosemite—April 21-22, 1955.

SACRAMENTO VALLEY COUNTIES—Cal-Neva—June 16-17, 1955.

A Circuit Course of Postgraduate Lectures will be given during the fall months of 1954 in the North Coast County cities of Eureka, Ukiah, Woodland and Napa. Lecturers are from the faculty of the University of California School of Medicine. The weeks of November 15 to 18, Neurosurgical Problems as the Result of Accident; December 6 to 9, Practical Diagnosis and Treatment of Cardiac Arrhythmias, Norman J. Sweet.

Contact: C. A. Broadus, M.D., Director of Postgraduate Activities, P.O. Box AI, Carmel, California.

Medical Dates Bulletin

THIS BULLETIN of the dates of postgraduate education assemblies and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: C. A. Broadus, M.D., P.O. Box AI, Carmel, California.

JANUARY

American College of Surgeons, Palm Springs, January 21-22, 1955.

CALIFORNIA MEDICAL ASSOCIATION, Annual Session, San Francisco, May 1-5, 1955.

AMERICAN MEDICAL ASSOCIATION

Clinical Session, 1954, Miami, November 30-December 3.

Annual Session, 1955, Atlantic City, June 6-10.

Clinical Session, 1955, Boston, November 29-December 2.

* * *

RESEARCH STUDY CLUB OF LOS ANGELES—24th Annual Mid-Winter Clinical Convention in Ophthalmology and Otolaryngology, January 17-28, 1955. Mr. H. M. Nickerson, Manager of the Elks Club, 607 Parkview Street, Los Angeles 57.



THE PHYSICIAN'S *Bookshelf*

THE PATHOLOGY OF TRAUMA—2nd Edition. Alan Richards Moritz, M.D., Professor of Pathology and Director of the Institute of Pathology of the School of Medicine, Western Reserve University, Cleveland. Lea & Febiger, Philadelphia, 1954. 414 pages, \$8.50.

Generally, the book is divided into chapters discussing and detailing the causes and the effects of mechanical injury on the various organ systems of the body. While the bulk of the volume is so specialized as not to be of general interest to all physicians, the physical principles of injury, the oft-discussed relation of trauma to tumors, etc., might be worthwhile reading for the practitioner.

While the book is said, in the preface, to be enlarged and thoroughly revised, a paragraph by paragraph comparison shows relatively modest change from the first edition. The chapter on mechanical injuries now touches on the kinetics of forces causing injury. The chapter on trauma and infection has been enlarged to offer more detail on specific infections and has new references added and a few removed. The last chapter dealing with the medicolegal autopsy merely touches on the subject and thus offers little to the experienced pathologist; and it might be better for the uninitiated to turn to one of the readily available more complete works for reading or reference on the subject.

Any practicing pathologist or physician engaged in medicolegal activities would do well to be familiar with the book.

Any physician who has occasion to treat any appreciable number of traumatic cases would gain from a familiarity with the subject matter of the text.

Any physician who is to be called on to testify about any traumatic death or who is to give expert opinion, would find himself better prepared to give such opinion in a manner most helpful to the court, after referring to the volume.

* * *

SALT AND THE HEART. Edward T. Yorke, M.D., Attending Cardiologist, Alexian Brothers Hospital, Associate Cardiologist, St. Elizabeth Hospital, Dispensary Physician, Elizabeth General Hospital, Elizabeth, N. J., Consultant in Medicine, Rahway Hospital, Rahway, N. J. Drapkin Books, 36 East 19th Street, Linden, N. J., 1953. 83 pages, \$3.45.

For the perplexed patient who is initially confronted with the rigors of a restricted sodium intake this monograph will adequately supplement the physician's instructions. It begins with a prologue concerning the tribulations of a retired seafarer (identified as an "Old Salt") who suffers from paroxysmal nocturnal dyspnoea. It ends with detailed information on how to interpret the labels on boxes of unsalted crackers.

Several preliminary chapters are devoted to brief descriptions of various physiologic derangements, fluid balance and exogenous salt requirements as well as the mechanism of edema formation based on the "forward failure" concept. Written in lay terms the material occasionally suffers from oversimplification especially when alluding to such complexities as the low salt syndrome, cation exchange resins and salt-losing nephritis.

The real value of the book is found in the latter part which contains simple conversion tables, a compilation of the sodium content of practically all foods, household hints for removing salt from numerous items, recipes for preparing menus and excellent advice on evaluating so-called low sodium products. Numerical sodium ratings (mg. per 100 gm.) are listed for each food and will certainly be appreciated by the bridge-playing homemaker accustomed to honor-counts.

* * *

CLINICAL ENDOCRINOLOGY. Karl E. Paschkis, M.D., Associate Professor of Medicine, Assistant Professor of Physiology, Director of the Division of Endocrine and Cancer Research, Jefferson Medical College; Abraham E. Rakoff, M.D., Clinical Professor of Obstetrics and Gynecologic Endocrinology, Jefferson Medical College; and Abraham Cantarow, M.D., Professor of Biochemistry, Jefferson Medical College. Paul B. Hoeber, Inc., 49 East 33rd Street, New York, 1954. 830 pages, 253 illustrations, 5 in full color, \$16.00.

This book will find its place among the best in the field of endocrinology and metabolism. It will best serve the student and practicing physician as a reference volume, yet despite its size and all-inclusiveness, it is brief and readable; controversial subjects are generally avoided. A good bibliography makes the book of additional value to the specialist. The material is presented for each gland in the order of embryology, anatomy, histology, physiology, pathology, pathologic physiology, diagnosis and treatment. Hence, answers to questions are easily found. Conditions of hypo- and hyperfunction of each gland are discussed in separate chapters. Emphasis is placed on pathologic physiology and integration of clinical and laboratory data. The section on diabetes is brief and that on the ovaries extensive. Chapters on obesity and methods are included. A list of commercial hormone preparations will be helpful. The illustrations, especially the photomicrographs, are very good. This book is highly recommended as a general text in clinical endocrinology.

* * *

MANUAL OF TROPICAL MEDICINE, A—2nd edition. Thomas T. Mackie, M.D., Chairman, American Foundation for Tropical Medicine; George W. Hunter, III, Ph.D., and C. Brooke Worth, M.D. W. B. Saunders Company, Philadelphia, 1954. 907 pages, 304 illustrations, \$12.00.

This manual, originally published during World War II under the auspices of the National Research Council, served the Armed Forces well and was enthusiastically received by others who studied and later practiced medicine in the tropics. In this second edition it fulfills even more effectively the constant need for an accurate, critically selected and condensed text on disease in the warm countries. An over-all review has been accomplished with the assistance of an imposing list of investigators thoroughly familiar with certain tropical diseases. This type of cooperation, so essential in modern compilations, was not solicited in the section of bacterial diseases. Because sometimes old sum-

maries were followed, some aspects of some infections escaped attention. These oversights are minor, even insignificant, deficiencies, completely submerged in the general high quality of the book. The illustrations are numerous and illustrative; the index (52 pages) is invaluable. The authors have set an excellent example in this index; the listings are logical and its coverage of the text is complete. Equally welcome to any physician or public health worker in the tropics are the descriptions of carefully selected and fully proven diagnostic laboratory procedures essential in tropical medicine. Any physician reading this manual will receive a good introduction to the ecology of human disease under the impact of environmental provocative factors.

* * *

THE THYROID—A Physiological, Pathological, Clinical and Surgical Study. T. Levitt, M.A., F.R.C.S.(Eng.), F.R.C.S.(Ed.), F.R.C.S.I., Hunterian Professor of the Royal College of Surgeons. E. & S. Livingstone, Ltd., London. Distributed through Williams and Wilkins Co., Baltimore, 1954. 606 pages, \$20.00.

This volume is written to elaborate upon and attempt to substantiate the author's hypothesis that "abnormalities of the thyroid gland are not isolated diseases, but are phases in an evolving continuum." He has found it expedient to describe six progressive phases of the toxic gland, as follows: (1) epithelial hyperplasia, (2) lymphoepithelial hyperplasia, (3) focal lymphoid hyperplasia, (4) diffuse lymphoid hyperplasia, (5) fibrolymphoid hyperplasia, (6) fibrosis.

With such a purpose and with a new classification, it is not surprising that the arrangement of the subject matter is novel. The reviewer, however, found the book difficult to read because of awkward wording, unclear concepts, and particularly because many statements of controversial nature are offered as fact with little or no qualification. The volume is profusely and beautifully illustrated in color as well as in black and white. In actual fact, the volume becomes more a text than an elaboration of an hypothesis, because it includes a discussion of all phases of thyroidology, from physiological considerations to surgical technique, albeit with the author's personal orientation. The special student of thyroid disease may find the book of interest because of its photography and the style of presentation, but the book is not recommended as a textbook for the medical student or general practitioner.

* * *

FRENCH'S INDEX OF DIFFERENTIAL DIAGNOSIS—Seventh Edition. Arthur H. Douthwaite, M.D., Senior Physician, Guy's Hospital; Honorary Physician, All Saints' Hospital for Genito-Urinary Diseases. The Williams and Wilkins Company, Baltimore, 1954. 1046 pages, 731 illustrations, 200 in color, \$20.00.

When the reviewer was a student, French's *Index of Differential Diagnosis* commanded a degree of awe and admiration which gave it an almost biblical quality. Since that time, physiological and etiological concepts have replaced the descriptive clinical patterns which French so diligently and comprehensively gathered into the *Index of Differential Diagnosis*, and other books have helped to civilize the wilderness into which French so bravely pioneered.

This is the first edition edited by Dr. A. A. Douthwaite. It has been completely revised or rewritten and has a number of new contributors. It has likewise been pruned to produce a more compact work; and much obsolete material has been weeded out and replaced. The indexing is still excellent.

However, the reviewer feels that a good deal remains to be done to give the book the status it once commanded. There is still too much retention of some of the older terms and concepts. (For example, Napkin Region Eruptions—applied

to infants and adults alike—requires a dictionary to set the American student straight.) There are not nearly enough tables of differential diagnosis and many of those present should be more inclusive. There are many excellent illustrations, a number of which are in color, but also quite a few which could well have been relegated to the limbo of the first or second edition.

To sum it up, too much of the book may be epitomized by the discussion on menorrhagia (pages 469-472): There is the usual definition and differentiation from metrorrhagia and methostaxis. There is the inclusive tabulation of the causes, divided into four categories. Then the contributor makes the revealing summary statement: "Since the discovery of the ovarian hormones and their activator the anterior pituitary gland, our conceptions of the causes of excessive menstrual loss have undergone considerable changes. It is a question whether some of the causes given in the above list should not be discarded, ovarian dysfunction being the true underlying cause."

Regardless of all this, the reviewer feels that there is a place for the *Index of Differential Diagnosis* on the reference shelf of medical libraries and as a one-volume consultant to be at the elbow of the medical practitioner. He recommends it for such purposes.

* * *

RECONSTRUCTIVE SURGERY OF THE EYELIDS—2nd Edition. Wendell L. Hughes, M.D., F.A.C.S., Hempstead, N. Y., The C. V. Mosby Company, St. Louis, 1954. 260 pages, 268 illustrations, \$8.50.

This book, now in its second edition, is very worthwhile for ophthalmic as well as plastic surgeons. The book deals with historical data as well as present-day techniques. There are 210 pages of subject matter followed by a very extensive list of reference works.

There is a definite need for this type of book because not only is lid reconstruction cosmetic but must be done properly to protect and preserve the integrity of the eyeball. It is essential that this type of surgery not be attempted without proper knowledge of the subject.

* * *

WINE AS FOOD AND MEDICINE. Salvatore P. Lucia, A.B., M.D., Sc.D., F.A.C.P., Professor of Medicine, U. C. School of Medicine. The Blakiston Company, Inc., New York, 1954. 149 pages, \$3.00.

An extremely interesting and worthwhile book describing the value of the *temperate* use of wine as a food and as a therapeutic agent. Its effect upon the psyche and various organ systems is thoroughly discussed. There is an extensive bibliography.

The scientific accuracy of the book is slightly impaired by reference to many experimental studies which are obsolete and to unsupported opinions from old writings.

* * *

ENDEMIC GOITER—The Adaptation of Man to Iodine Deficiency. John B. Stanbury, M.D., Gordon L. Brownell, Ph.D., Douglas S. Riggs, M.D., and Hector Perinetti, M.D., Juan Itoiz, Ph.D., Enrique B. Del Castillo, M.D. Harvard University Press, Cambridge, Mass., 1954. 209 pages, \$4.00.

This is a fascinating and well-written account of the fundamental nature of endemic (iodine deficient) goiter. The authors have described their studies upon goitrous patients living on the Mendoza slopes of the Argentine Andes, an area known to be deficient in iodine. Such a study might never have been possible had not a team of American workers cooperated with Argentine physicians and officials and completed the study just prior to the introduction of iodized salt for goiter prophylaxis. Following a very interesting account of the locale of the study and a

description of the clinical material, the work proceeds to discussions of the metabolism of iodine, physiological principles governing thyroid function, and newer methods of evaluating thyroid function, including application of isotope techniques.

The investigation of the Mendoza subjects is reported in considerable detail and includes observations of the effects of treatment with iodine, thyroid, antithyroid drugs, and thyrotropin.

Summaries and useful bibliographies are included at the end of each chapter, and a final summary chapter serves as a useful review and outlines areas of suggested research.

This book is a classic in its field and is destined to remain an outstanding reference source in the fields of endocrinology and metabolism for many years to come. It can be highly recommended to interested medical students, practicing physicians, endocrinologists, biophysicists, and biochemists.

* * *

PEDIATRIC PROBLEMS IN CLINICAL PRACTICE—Special Medical and Psychological Aspects. H. Michal-Smith, Ph.D., Editor, Research Associate in Pediatrics, New York Medical College, Chief Clinical Psychologist, Flower and Fifth Avenue Hospital. Grune & Stratton, New York, 1954. 310 pages, \$5.50.

The special types of problems dealt with in this book are those of the child who is emotionally disturbed, schizophrenic, mentally retarded, brain-injured, orthopedically handicapped, allergic, diabetic, epileptic, tubercular, or handicapped for cardiac reasons or by cerebral palsy. Each such child has a chapter devoted to him, written by one of the 13 contributors to the volume. The author has written an interesting chapter on the mentally retarded child. Other contributors include Arnold Gesell, Lauretta Bender, Priscilla White, William Lennox, Bret Ratner, Winthrop Phelps and several others.

The volume should make a useful addition to the library of those pediatricians or other physicians dealing with children handicapped by the problems mentioned.

* * *

SYNOPSIS OF ANESTHESIA, A—3rd Edition. J. Alfred Lee, M.R.C.S., L.R.C.P., M.M.S.A., D.A., F.F.A.R.C.S., Consultant Anesthetist to the Southend-on-Sea Hospital, etc. The Williams and Wilkins Company, Baltimore, 1953. 483 pages, \$3.50.

This book is essentially a compendium of knowledge in the field of anesthesiology. As such, it fills a great need in the library of the expert, occasional and resident anesthesiologist in providing accurate surveys in outline and short discussion form the basic information required to understand the ever-broadening field of anesthesiology. A great deal of reference material is cited for further reading; of necessity the bulk of the material so listed is from foreign journals. Most of these are, however, available in any library maintained by local medical societies.

A great many of the chapters have been enlarged and expanded from the second edition of this book and two short chapters have been added; one on the reduction of bleeding during operations and the other on the therapeutic aspects of anesthesia. These are short but packed with information.

Of minor nuisance value is the continued use of a nomenclature common to the British Isles. American synonyms are included frequently enough to prevent complete bewilderment, but it would be of great assistance to refer to body weight in "pounds" rather than the more unfamiliar and cumbersome "stone." A great many pages are devoted to the description and operation of English apparatus not likely to be found in this country. Aside from these minor

faults which can be quickly omitted without great loss of time, this book contains more information of an accurate nature than any other we have found.

The chapters on anatomy, physiology and pharmacology are gems and the precision and thoroughness of their presentation can well make some larger, more pretentious textbooks blush for shame.

On the whole, the book is stimulating and as complete as an expanded outline can be. We heartily recommend it to anyone working or interested in the field of anesthesiology.

* * *

MODERN TRENDS IN DERMATOLOGY (Second Series). Edited by R. M. B. MacKenna, M.A., M.D.(Camb.), F.R.C.P.(Lond.), Physician in Charge, Dermatological Department, St. Bartholomew's Hospital. Paul B. Hoeber, Inc., New York, 1954. 338 pages, \$12.00.

This book is as outstanding as the first edition. Seventeen separate essays by seventeen authors review and bring up-to-date important developments in the field of dermatology.

Chapter I presents a scholarly presentation of ecology in relationship to dermatology. Chapter II, in a critical evaluation of psychosomatic medicine in relationship to dermatology, is the best review of this subject which has appeared in years. Haserick's chapter on the blood factors in lupus erythematosus is beautifully illustrated and clearly written. New developments such as cyto diagnosis in dermatology, the pathogenesis of tinea capitis and beta-ray therapy are handled in a scholarly fashion.

A book of this sort is extremely useful in the sense of a complete, up-to-date, interpretative view of the modern trends which may have escaped the attention of one who does not have an opportunity to read widely the medical journals of the world.

* * *

DERMATOLOGIC MEDICATIONS. Marguerite Rush Lerner, M.D., Resident, Department of Dermatology, and Aaron Bunsen Lerner, M.D., Ph.D., Associate Professor of Dermatology, University of Oregon Medical School, Portland. The Year Book Publishers, Inc., 200 East Illinois, Chicago, 1954. 183 pages, \$3.00.

This is a handbook intended as a reference for students and busy practitioners who desire useful and up-to-date information on dermatologic therapeutics.

The publication is divided into two sections: therapeutic agents, and treatment regimens. In the first section, commonly used agents are discussed as to indications, chemical structure, mode of action in skin disease, and application. In the second section, therapeutic regimens are outlined for various common dermatoses.

By limiting the information to a practical basis, the authors have succeeded in limiting the size of the volume, yet it is surprisingly complete.

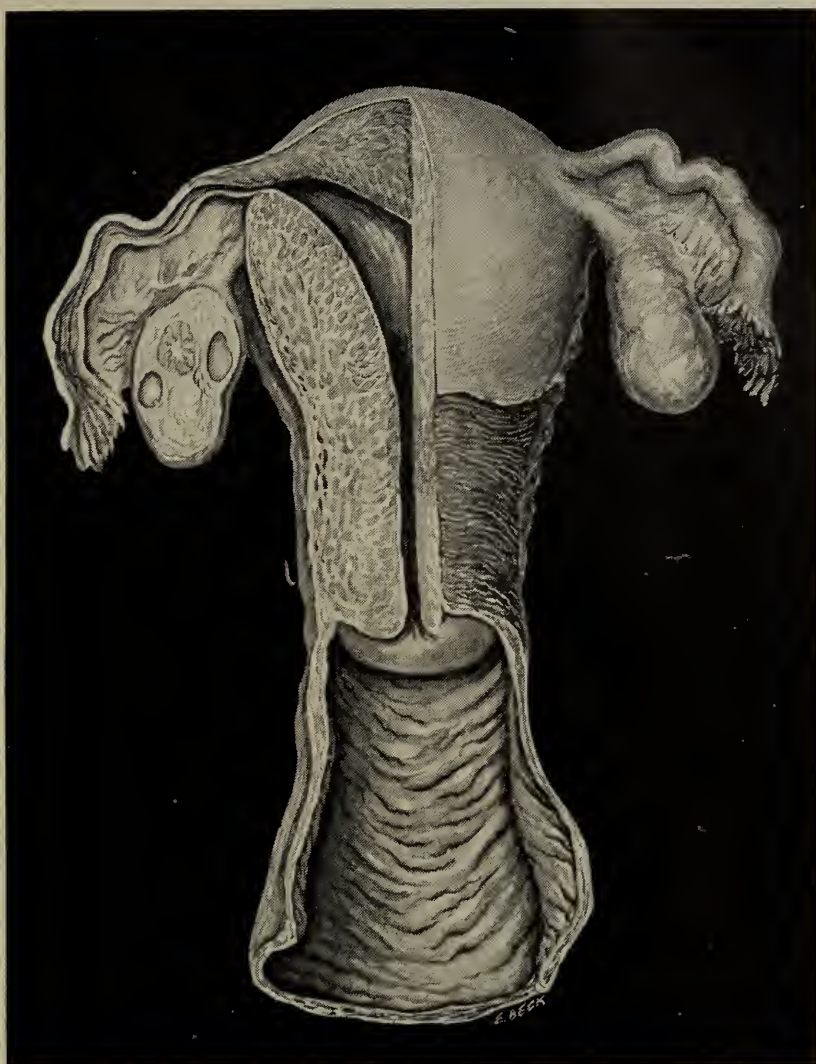
This handbook can be recommended to students and busy practitioners, regardless of specialty, who are interested in skin disease.

* * *

HANDBOOK ON DISEASES OF CHILDREN—Including Dietetics and the Common Fevers—7th Edition. Bruce Williamson, M.D. (Edin.), F.R.C.P. (Lond.), Physician, Children's Department, Royal Northern Hospital. E. & S. Livingstone Ltd.; distributed in U.S.A. by Williams and Wilkins Co., Baltimore, 1953. 467 pages, \$5.00.

This Handbook on Diseases of Children is in its seventh edition. Appearing first in 1933, it has been periodically revised. Many of the viewpoints expressed are not in conformity with current American thinking. It should be more popular among the older practitioners of the British Empire than with recent graduates from schools of this country.

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*Sturnick, M. I., and Gargill, S. L.: New England J. Med. 247:829 (Nov. 27) 1952.

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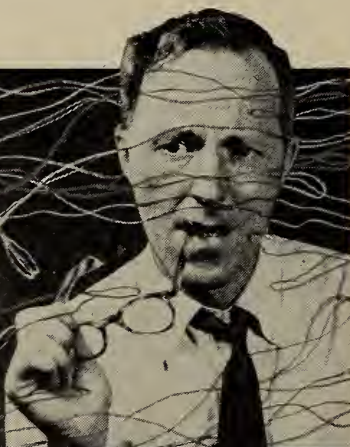
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Gamma Globulin Shown More Effective

A restudy of gamma globulin shows that it is slightly more effective against poliomyelitis than it appeared before, it was reported recently by a team of investigators aided by the National Foundation for Infantile Paralysis.

Laboratory tests, not available immediately after the 1951-52 field trials of GG, were used to reanalyze its value. Several changes in results appeared, according to scientists reporting in a recent issue of the *Journal of the American Medical Association*.

Conclusions by officials evaluating GG after the field trials were that it gave significant protection. These officials later said that evidence from the 1953 mass inoculations of the serum did not demonstrate whether GG did or did not have any effect against polio. Dr. William McD. Hammon, Pittsburgh, a leading member of the investigators, said then that the serum "has an extremely limited application in the field of preventive medicine and will not produce dramatic results in general use." The investigators said no conclusions could be reached from this mass use of GG because the inoculations were not made under experimental control conditions.

They conclude from the latest study, however, that "unless better evidence has become available, use of gamma globulin after recognized exposure among family contacts or any other contacts of known cases is supported by suggestive, although admittedly inconclusive, experimental data."

"At least, there is no basis for concluding that gamma globulin will not protect under such conditions," they said.

As a result of the new study, public health officers have been notified to use gamma globulin for family groups, where persons are more likely already to be in the incubation period. The order reverses the original "large-group-inoculation-only" agreement between the U. S. Public Health Service, the National Foundation for Infantile Paralysis, the American National Red Cross, and the Office of Defense Mobilization.

Evidence from the new laboratory analysis suggests that protection by GG "began to have a noticeable effect late in the incubation period, was most effective when given at about the time of exposure or one week before, and continued with slowly diminishing effect for six to eight weeks."

According to the National Foundation for Infantile Paralysis, which sponsors the GG studies, the serum could be considered "the weapon that held the fort until the big guns could be brought up." The foundation said GG is being used while waiting for the results of the tests on the "big gun"—the trial vaccine developed by Dr. Jonas E. Salk of the University of Pittsburgh.

The latest report said that the use of GG "would not ordinarily have been considered if anything else

(Continued on Page 72)

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Rural Health To Push 3-Point Program

The American Medical Association Council on Rural Health and its advisory committee, made up of representatives from several national, agricultural and educational organizations, held a three-day meeting in Chicago recently and formulated a three-point program on which the council will concentrate during the next year. The three points are:

1. More doctor participation with lay groups. Rural people are asking for and welcoming assistance and advice.

2. More cooperation with country newspapers and farm journals, in supplying health information.

3. Bringing rural people closer together by suggesting that county medical societies invite county extension agents and farm leaders to appear on their programs and that rural organizations invite physicians to speak to them.

Plans for the forthcoming Tenth National Conference on Rural Health were formulated. This annual conference is to be held at the Schroeder Hotel, Milwaukee, February 24-26, 1955. As in previous years, the Thursday morning session preceding the formal opening of the conference will be for physicians. This meeting will be devoted to problems confronting physicians who are members of state rural health committees or committees handling rural health programs. The formal session of this conference will begin Thursday afternoon and continue through the Saturday luncheon session.

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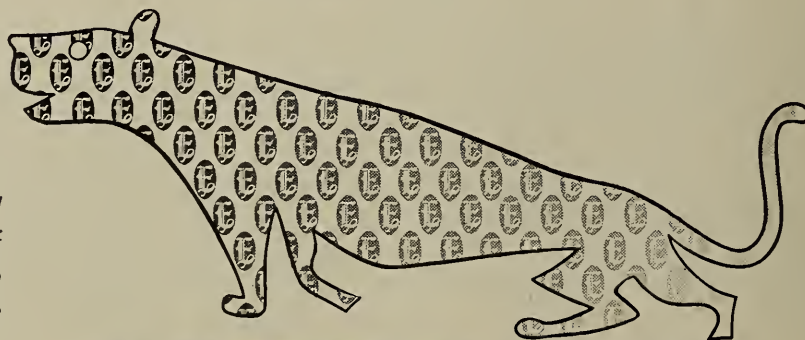
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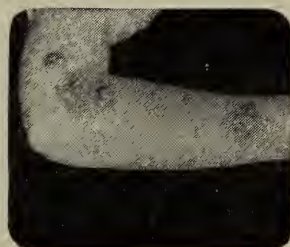
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Histamine Relieves Pain In Blood Vessel Diseases

The body chemical that makes hay fever patients suffer can bring relief from disabling leg pains to patients with blood vessel diseases, a New York City physician recently said.

Dr. Isidor Mufson reported in a recent issue of the *Journal of the American Medical Association* on infusions of histamine for patients with diseases of the peripheral blood vessels. The infusions helped many patients to walk again and even prevented amputation in some severe cases.

Diseases resulting in closure of the vessels, such

as arteriosclerosis, have become more important as causes of death because they occur with advancing age and because our life span has been increased, he said. Insufficient circulation in those vessels is "rarely cured by removing the cause" but frequently can be helped by expanding the nearby vessels.

Dr. Mufson said histamine, acting as a dilator, also may bring about permanent structural changes which prolong the successful effect of the treatment. Histamine is a natural body product, and its unusual concentration in the blood stream is what causes the swollen nose membranes and tearful eyes of the hay fever sufferer. It is too strong to be in-

(Continued on Page 66)



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1. Fetter, T.R., Delaware State Med. J. 25:309, Nov. 1953.

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Histamine Relieves Pain In Blood Vessel Diseases

(Continued from Page 60)

jected into the veins in concentrated form, Dr. Mufson said, but when infused, or allowed to flow by gravity into an artery, it is "safe" and "powerful."

Symptoms of peripheral blood vessel diseases include reduced tolerance to walking, and sleep-preventing pain when the patient is lying down. The pain can be relieved only by standing.

Dr. Mufson said that of 150 patients with foot and leg pain, 36 per cent were able to walk up to seven blocks after treatment with histamine. Fifty-two per

cent could walk from seven blocks to an unlimited distance. Of this last group, 40 per cent remained improved for as long as two to seven years after treatment. In another group of 41 patients treated and reported by other physicians, 70 per cent walked better after histamine infusions.

Dr. Mufson said 23 patients, so disabled that amputation was being considered, returned to normal routines. Only six severe cases required amputation. Many of this whole group had gangrene. The histamine infusions plus antibiotics helped to clear up infections among the gangrenous patients, Dr. Mufson said.

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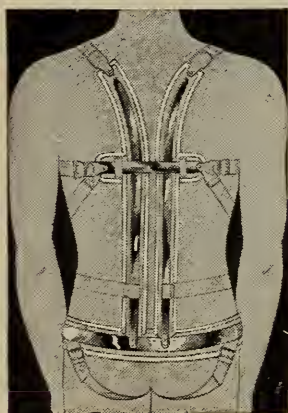
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Problem Drinker Should Be Helped While at Work

The "problem drinker" in industry can be cured best by keeping him on the job while helping him to solve his problem.

Allowing the employee to keep working while he tries to stop drinking is like the successful treatment of World War II casualties at the front instead of at rear bases. It gives the worker, like the soldier, "the feeling of courage and pride that one gets by staying in the fight and not retreating." Dr. Thomas H. Hogshead, of the Medical Division of E. I. du Pont de Nemours & Co., Wilmington, Del., reported on the company's program in a recent issue of *Archives*

of *Industrial Hygiene and Occupational Medicine*, published by the American Medical Association.

"Our program is successful," he said. "An estimated 65 per cent of the cases treated have been rehabilitated. The total cost of the program is estimated at less than \$100,000. The total gains cannot be measured."

The worker's "need for security, for recognition, for position, as well as his desire to belong and to be led, are all met on the job," Dr. Hogshead said. "Such motivation is of paramount importance in the approach to the problem of alcoholism in industry."

The employee considered a problem drinker is

(Continued on Page 82)



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Dose: One to four tablets daily, depending on degree of sedation required.

SMITH-DORSEY • Lincoln, Nebraska A Division of **THE WANDER COMPANY**

Gamma Globulin Shown More Effective

(Continued from page 52)

had been available. . . . This certainly does not mean that gamma globulin prophylaxis has no practical application in poliomyelitis. If further research studies with suitable controls could be carried out the most advantageous application could probably be determined."

The new study, based only on polio cases confirmed by laboratory tests and not just by clinical diagnosis, shows GG protected between about 75 and 88 per cent of those inoculated from three days to eight weeks after infection. Protection included either prevention of polio or lessening of paralysis.

The study was made by scientists from the University of Pittsburgh, the University of Pennsylvania, the Children's Hospital of Philadelphia, and the Camden Municipal Hospital for Contagious Diseases.

They said earlier conclusions about GG were inconclusive partly because no complete laboratory data were available at that time, and because the first study included paralytic cases later found to be caused by some virus other than polio. The new study shows that polio among GG-inoculated patients represented only 19 per cent of the whole group of inoculated and noninoculated cases. Previously the percentage appeared to be over 25.

"Several changes can be noted," they said. "Some

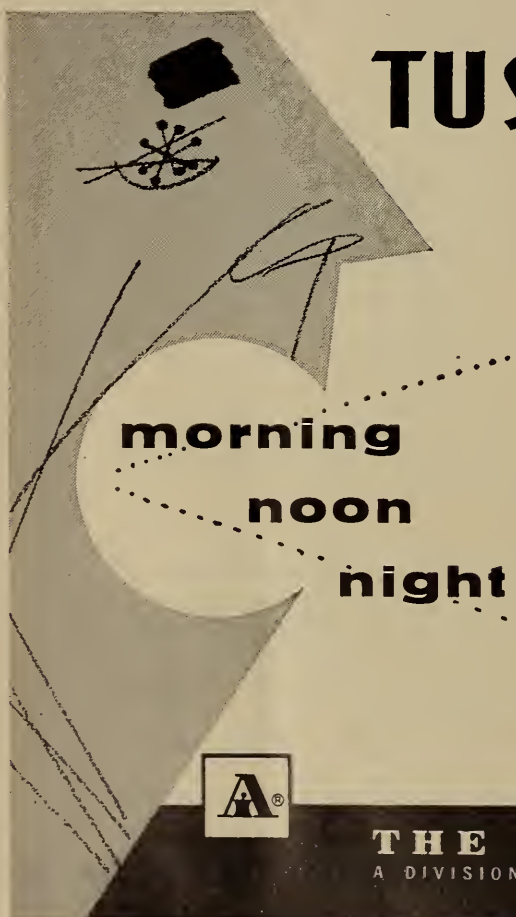
protection during the first week (latter part of the incubation period) now appears more probable; protection during the next four weeks, highly significant before, is even greater; and protection in the period six through eight weeks after injection . . . also appears greater."

Grading the severity of paralysis in the laboratory-confirmed cases of polio showed that "cases occurring during the first through the sixth week after inoculation were milder among those given gamma globulin than among those given gelatin. The difference observed for this period of time is significant," they said. If GG given in the late period of incubation fails to prevent polio, it may modify it. Confirmation of these findings in tests on a larger group would indicate that GG cut the incidence of residual paralysis by 61 per cent among those patients injected in the last week of incubation.

"The application of this information to use in family contact groups is obvious," Dr. Hammon and his associates said. "Many statements have been quoted from authoritative sources by the lay press and have appeared repeatedly . . . to the effect that gamma globulin offers no protection if given after infection.

"The more accurate data based only on laboratory-confirmed cases lend support to the hypothesis that antibody given during the incubation period

(Continued on Page 82)



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By mild expectorant and calming action, Tussar provides 'round-the-clock control of even obstinate, hacking coughs.

Tussar contains a superior antihistamine—prophenpyridamine maleate—and dihydrocodeinone bitartrate, approximately 6 times more potent than codeine. This means cough sedation with much smaller dosage.

Tussar is well tolerated and pleasant tasting. You can prescribe it with confidence in any age group.

Each fluid ounce of TUSSAR contains:

Dihydrocodeinone Bitartrate.	1/6 gr.
Warning—May be habit forming.	
Potassium Guaiacol Sulfonate, N.F.8 gr.
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Gallogen acts directly on the hepatic cells. It stimulates the flow of bile which is whole in volume and composition. The choleresis is in proportion to the functional capacity of the liver and is prompt and lasting.

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Supply: in bottles of 100 and 1000 tablets containing 75 mg. of the diethanolamine salt of the mono-d-camphoric acid ester of p-tolylmethyl carbinol.

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Alien Physicians Fill Hospital Vacancies

A large increase in alien physicians taking postgraduate work in the United States has helped fill gaps left by many young doctors now on active military duty, a survey has shown.

The number of aliens on U. S. hospital staffs more than doubled from 1950-51 to 1953-54, the survey showed in a recent issue of the *Journal of the American Medical Association*.

During the 1953-54 school year, 5,589 foreign physicians held appointments as interns, residents, or fellows on house staffs of the 800 civilian hospitals approved for such training by the Department of State. Three years before the total was 2,072.

These aliens cut the number of vacancies in those hospitals down to 20 per cent for residents and 30 per cent for interns. Without them the percentage would have been considerably greater, since "many young physicians who would normally be taking postgraduate work are on active military duty." Aliens made up 22 per cent of the total house staffs in the approved hospitals. Most of them were located

in general hospitals which do not serve as major teaching hospitals for medical schools. They made up almost half the staffs of tuberculosis hospitals approved for alien training, and about one-fourth of the staffs of mental hospitals, but only about one-tenth of the teaching hospital staffs.

Three states—Mississippi, North Dakota and Arkansas—had no alien physicians in training. Largely because of state licensing laws, more than two-thirds of them were in five states—New York, Ohio, New Jersey, Illinois, and Massachusetts. In New Jersey, 65 per cent of the house staff positions were filled by aliens, and in New York, Illinois, and Ohio, about 30 per cent.

The postgraduate alien training program began in mid-1949 under the U. S. Information and Educational Exchange Act of 1948. The report in the *Journal* was made by Harold S. Diehl, M.D., Minneapolis; Edwin L. Crosby, M.D., Chicago, and Paul K. Kaetzel, B.A., Washington, of the Health Resources Advisory Committee of the Office of Defense Mobilization.

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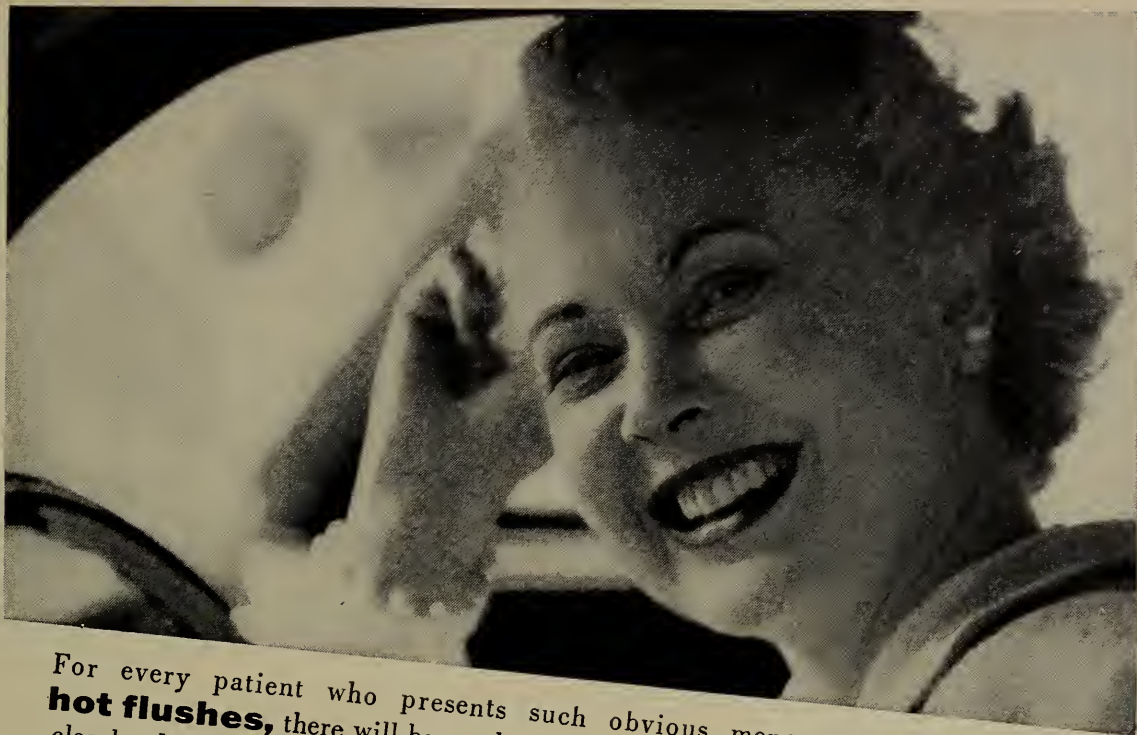
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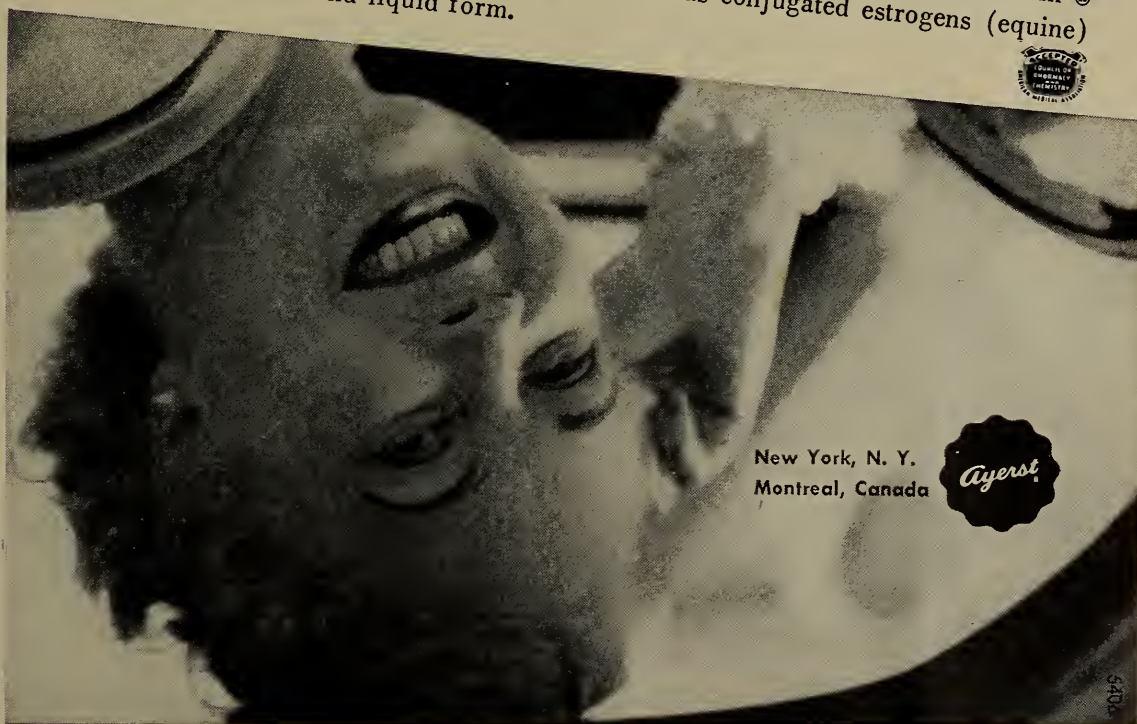
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Gamma Globulin Shown More Effective

(Continued from Page 72)

has a beneficial effect that can be interpreted either as modification or prevention."

Cooperating in the report were Lewis L. Coriell, M.D., Camden, N. J.; Ernest H. Ludwig, Ph.D., Pittsburgh; Robert M. McAllister, M.D., Camden; Arthur E. Greene, Ph.D., Philadelphia; Gladys E. Sather, M.P.H., Pittsburgh, and Paul F. Wehrle, M.D., Baltimore.

A preliminary report on part of the reanalysis was presented at the 103rd annual meeting of the A.M.A. on June 24, 1954, in San Francisco.

Problem Drinker Should be Helped While at Work

(Continued from Page 67)

advised he is being turned over to the medical division. At the end of three months the division recommends either that he is trying and should be retained, or that he shows no interest in rehabilitation and should be discharged.

The company cooperates closely with Alcoholics Anonymous, and has a "companywide alert" to the problem and its treatment. "The fact that alcoholism or problem drinking is accepted as a disease by a company so scientific as du Pont and treated as any other illness by our medical division has opened the way for the rehabilitation of hundreds of employees," Dr. Hogshead said.

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Personal communication (Apr. 12, 1950)

1951 Of 119 patients treated with Azulfidine prior to 1944, 90 patients (75%) were symptom-free or considerably improved when re-examined in 1949.
Svartz, N.: Acta. Med. Scandinav. 141:172, 1951.

1952 In a series of 52 patients with chronic ulcerative colitis 30, or 58%, showed significant improvement after treatment with Azulfidine.
Morrison, L. M.: Gastroenterology 21:133, 1952.

1953 *Morrison* says: "Azopyrine [Azulfidine] . . . has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."
Morrison, L. M.: Rev. Gastroenterology 20:744 (Oct.) 1953.

Literature available on request from:

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Executive Offices: 270 Park Ave., New York 17, N. Y., Sales Offices: 300 First St., N.E., Rochester, Minn.

"Parrot Fever" Can Come from Chickens

"Parrot fever," commonly believed to be a rare disease caught only from parrots and parakeets, probably is not so rare and even can come from chickens, turkeys, and ducks.

Thirty-seven cases of psittacosis probably caught from chickens were found during six months in the rural area around Warren, in northwestern Illinois. The cases were reported in a recent issue of the *Journal of the American Medical Association*.

Investigation of possible sources of the disease showed chickens to be "the only potential reservoir commonly associated with these cases." Not all resulted from direct contact with chickens. One patient

had cleaned a chicken yard two weeks before his illness; another had an apparently well parakeet; another had an apparently well canary.

Besides a severe cough—the chief complaint—the patients had chest pain, fever, headaches, muscular aches and pains, backaches, and weakness or fatigue. None died. "It would certainly appear from our experience that in any case of virus pneumonia or chronic cough occurring in persons in rural areas, the possibility of psittacosis infection should be considered," the writers said.

The report was made by Drs. C. George Ward, Warren, Ill., Albert L. Hildinger, Galena, Ill., Jackson P. Birge, Rock Island, Ill., and public health official Richard A. Morrissey, Chicago.



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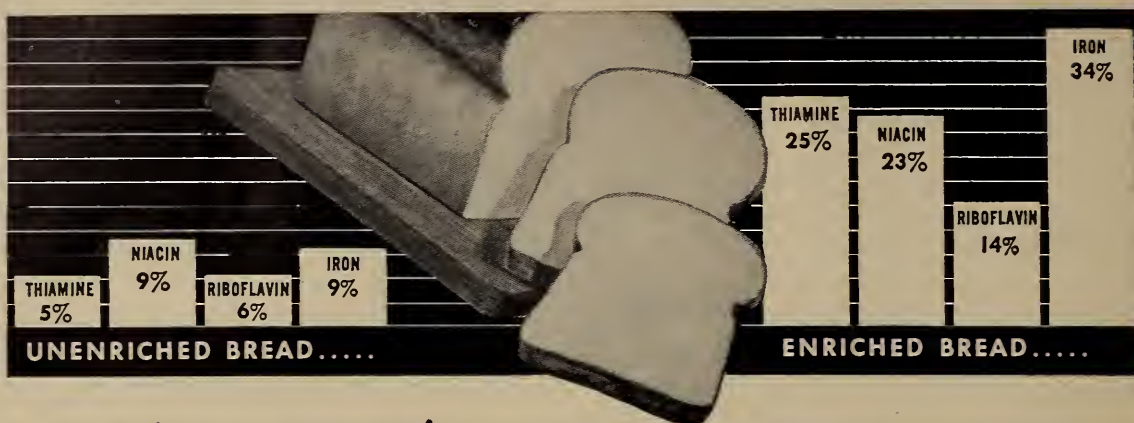
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Because of its high nutrient value, its easy and almost complete digestibility, and its universally accepted pleasant, bland taste, enriched bread merits a prominent place not only in the general diet, but in special diets as well. In many reducing diets 3 or more slices daily are included. The average slice of machine-sliced enriched bread supplies only 63 calories.

At notably low cost, enriched bread is making a valuable contribution to the nutritional health of the American people.

1. Watt, B.K., and Merrill, A.L.: Composition of Foods—Raw, Processed, Prepared, United States Department of Agriculture, Agricultural Handbook no. 8, 1950.
2. Data furnished by the Laboratories of The American Institute of Baking, Chicago, Illinois.
3. Sebrell, W.H., Jr.: Trends and Needs in Nutrition, J.A.M.A. 152:42 (May 2) 1953.
4. Flour and Bread Enrichment, 1949-50, The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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**Daily dietary allowances (1953) recommended by the National Research Council for a fairly active man 45 years of age, 67 inches in height, and weighing 143 pounds.

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1. Rogers, H. L.: Ann. Allergy 12:266 (May-June) 1954.

*T.M. Reg U.S. Pat. Off.

Patent Applied For

"Cancer Cure" Found To Be Only Cough Medicine

The American Medical Association's Bureau of Investigation recently reported that the only "pharmacologically active" ingredient in the so-called Hoxsey "cancer tonic" is a drug used mainly in cough medicine.

The bureau observed in a recent issue of the *Journal of the American Medical Association* that it sees no reason for the A.M.A. to further investigate the remedy.

It points out that the federal government has obtained an injunction against shipment of the material in interstate commerce as a cancer medicine.

Any person with "a modicum of knowledge" of drugs knows that the medicine "is without any therapeutic merit in the treatment of cancer," the bureau said.

"Any such person who would seriously contend that scientific medicine is under any obligation to investigate such a mixture or its promoter is either stupid or dishonest.

"There is indication that certain persons, including a Pennsylvania state senator and several physicians, magazine editors, and newspaper editors, have sought to create in the minds of the public an idea that organized medicine, particularly the American Medical Association, will not give Mr. [Harry] Hoxsey an opportunity to demonstrate his claimed cancer cure before the world, because it refuses to send representatives to Dallas, Texas, to investigate.

"It is fair to observe that the American Medical Association or any other association or individual has no need to go beyond the Hoxsey label to be convinced," the bureau stated.

"Under the circumstances, the whole picture would be extremely ludicrous except for the appeal to the credulous and unreasoning, which can conceivably result in unnecessary injury, damage, and death to many persons, not from an overdose of the Hoxsey tonic, but by reason of their relying on it instead of on proper, established procedures until their condition has progressed so far that they cannot be cured."

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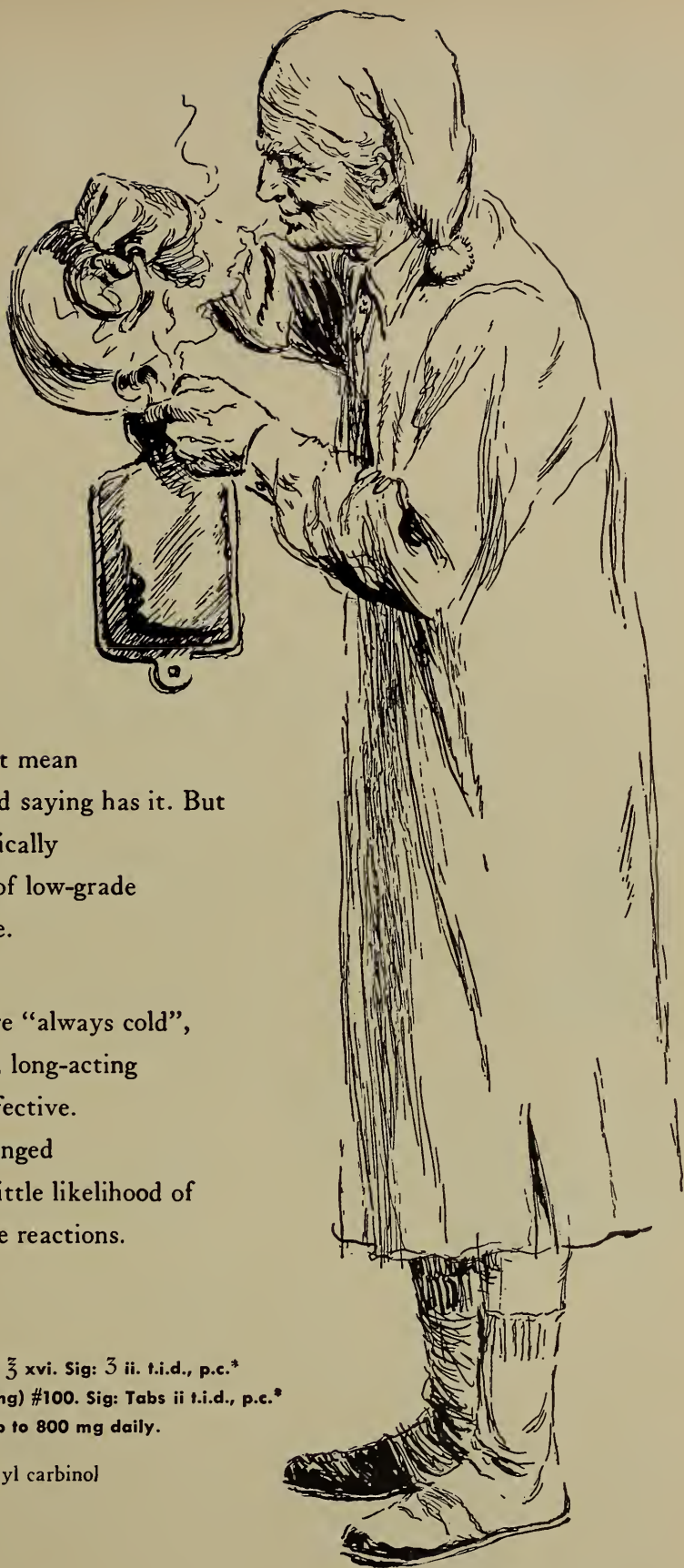
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Alameda-Contra Costa Medical Assn., 6230 Claremont Avenue, Oakland 18. Meets Third Monday, 8:15 p.m., Hunter Hall, Oakland.
Pres., James B. Graeser, 298 Grand Ave., Oakland.
Secy., Bernard B. Gadwood, 2815 MacDonald Ave., Richmond.

Butte-Glenn Medical Society. Meets Fourth Thursday.
Pres., Thomas Elmendorf, Masonic Bldg., Willows.
Secy., Karl J. Chiappella, 184 E. 5th St., Chico.

Fresno County Medical Society, 616 Security Bank Building, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside Country Club.
Pres., Fred E. Cooley, 4313 E. Tulare St., Fresno.
Secy., J. Cooper Collins, 2920 Fresno St., Fresno.

Humboldt County Medical Society. Meets First Thursday.
Pres., Clarence Crane, Jr., 492 Main St., Ferndale.
Secy., Ted W. Loring, 715 I St., Eureka.

Imperial County Medical Society. Meets Second Tuesday, 8 p.m., Pioneer Memorial Hospital, Brawley.
Pres., Sidney M. Tepper, 136 N. 5th St., El Centro.
Secy., Ernest Brock, 200 S. Imperial Ave., Imperial.

Inyo-Mono County Medical Society. Meets Fourth Tuesday except December, January, February.
Pres., Victor H. Hough, Lone Pine.
Secy., Robert W. Denton, 611 W. Line, Bishop.

Kern County Medical Society, 1300 Chester Avenue, Bakersfield. Meets Third Tuesday, 7:30 p.m., Stockdale Country Club except June, July, August.
Pres., L. N. Osell, 2011 18th St., Bakersfield.
Secy., R. W. Burnett, 515 Truxtun Ave., Bakersfield.

Kings County Medical Society. Meets Second Monday, 8:00 p.m., Legion Hall, Hanford.
Pres., Lloyd Christensen, Van Sicklen Bldg., Hanford.
Secy., N. F. Sorensen, Van Sicklen Bldg., Hanford.

Lassen-Plumas-Modoc County Medical Society. Meets on call.
Pres., R. M. Peters, Portola.
Secy., Charles W. Brown, Western Pacific Hospital, Portola.

Los Angeles County Medical Assn., 1925 Wilshire Blvd., Los Angeles 57. Meets First and Third Thursdays, 1925 Wilshire Blvd., Los Angeles.
Pres., J. Philip Sampson, 2200 Santa Monica Blvd., Santa Monica.
Secy., Ewing L. Turner, 1930 Wilshire Blvd., Los Angeles 57.

Madera County Medical Society.
Pres., Omar U. Need, 117 S. B St., Madera.
Secy., Gordon C. Hall, 501 E. Yosemite, Madera.

Marin County Medical Society. Meets Meadow Club of Tamalpais, Fourth Thursday of every month, 7:00 p.m.
Pres., Leo L. Stanley, 1322 5th Ave., San Rafael.
Secy., Wm. Burgett Smith, 711 D St., San Rafael.

Mendocino-Lake County Medical Society.
Pres., Olga A. Miller, Box X, Talmage.
Secy., Martin S. Barnes, 615 Main, Fort Bragg.

Merced County Medical Society. Meets Fourth Thursday, Hotel Tioga, Merced.
Pres., William Fountain, Shaffer Bldg., Merced.
Secy., John East, 652 W. 20th Street, Merced.

Monterey County Medical Society. Meets First Thursday.
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Secy., Clyn Smith, Jr., Cass and Carmelita, Monterey.

Napa County Medical Society. Meets Second Wednesday.
Pres., Harold E. James, Sanitarium, Calif.
Secy., Merle F. Godfrey, 1519 Jefferson, Napa.

Orange County Medical Association, 1226 N. Broadway, Santa Ana. Meets First Tuesday, 7:00 p.m.
Pres., A. Norton Donaldson, 1330 N. Main St., Santa Ana.
Secy., Chad M. Harwood, 1202 N. Broadway, Santa Ana.

Placer-Nevada-Sierra County Medical Society. Meets every second Wednesday of each month.
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Riverside County Medical Association, 4241 Market Street, Riverside. Meets Second Monday, 8:00 p.m., El Loro Room, Mission Inn.
Pres., Van R. Hamilton, 6876 Magnolia, Riverside.
Secy., Vean M. Stone, 4241 Market Street, Riverside.

Sacramento Society for Medical Improvement, 2731 Capitol Ave., Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.
Pres., A. E. Berman, 2901 Capitol Ave., Sacramento.
Secy., Frank G. Schiro, 815 30th St., Sacramento.

San Benito County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.
Pres., E. C. Sheldon, 956 San Benito St., Hollister.
Secy., Peter Jones, Bank of America Bldg., Hollister.

San Bernardino County Medical Society. Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.
Pres., Leonard M. Taylor, 3549 Valencia Ave., San Bernardino.
Secy., Carl M. Hadley, 315 Platt Bldg., San Bernardino.

San Diego County Medical Society, 101 Medical-Dental Bldg., San Diego 1. Meets Second Tuesday, Manor Hotel.
Pres., Howard A. Ball, 307 Medico-Dental Bldg., 233 A St., San Diego 1.
Secy., Maurice J. Brown, 2001 Fourth Ave., San Diego 1.

San Francisco Medical Society, 2180 Washington St., San Francisco 9. Meets Second Tuesday, 8:15 p.m., 2180 Washington St., San Francisco 9.
Pres., Samuel R. Sherman, 2107 Van Ness Ave., San Francisco.
Secy., Matthew N. Hosmer, 384 Post St., San Francisco.

San Joaquin County Medical Society. Meets First Thursday, 8:15 p.m., 936 N. Commerce St., Stockton.
Pres., James Baker, 845 N. California St., Stockton 3.
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San Luis Obispo County Medical Society. Meets Third Saturday, 7:00 p.m., Golden Dragon Cafe, San Luis Obispo.
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San Mateo County Medical Society, 122 Second Ave., San Mateo. Meets Third Tuesday of each month.

Pres., Bradley C. Brownson, 23 Baldwin Ave., San Mateo.
Secy., Norman C. Fox, 512 Jenevein Ave., San Bruno.

Santa Barbara County Medical Society, 300 West Pueblo St., Santa Barbara. Meets Second Monday, Cottage Hospital.
Pres., Laurence E. Heiges, 202 E. Cypress, Lompoc.
Secy., Arthur E. Wentz, 300 W. Pueblo, Santa Barbara.

Santa Clara County Medical Society, 1024 The Alameda, San Jose 26. Meets Third Monday of every month.
Pres., Burt L. Davis, 261 Hamilton Ave., Palo Alto.
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Santa Cruz County Medical Society. Meets every Second month, Second Tuesday. Time, place to be announced.
Pres., D. S. Sedgwick, Capitola.
Secy., Samuel B. Randall, 230 Walnut Ave., Santa Cruz.

Shasta County Medical Society. Meets First Monday.
Pres., H. Harper Thorpe, 1529 Market St., Redding.
Secy., Roy W. Thomas, 1555 Court St., Redding.

Siskiyou County Medical Society. Meets Sunday on call.
Pres., Albert A. Newton, 807 S. Main, Yreka.
Secy., Victor J. Thompson, Weed Hospital, Weed.

Solano County Medical Society. Meets Second Tuesday, 8:00 p.m., Casa de Vallejo Hotel, Vallejo.
Pres., Herbert L. Joseph, 607 Carolina, Vallejo.
Secy., Robert L. Garrett, 327 Georgia, Vallejo.

Sonoma County Medical Society, 300 American Trust Bldg., Santa Rosa. Meets Second Thursday.
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Now even though a woman may graduate ahead of all the men in her class, she may also lead one of them to the altar. In fact, he may sit with their children in the audience while she accepts her diploma.

The 1954 graduating class of the Woman's Medical College of Pennsylvania (the only medical school in the country which doesn't admit men) even included a very young grandmother.

And at the coeducational medical schools it's the same story but with an important difference. There the women may carry off top honors from their male classmates. Proof of this is the six women who topped their male-dominated medical school classes and received annual Awards of Achievement from the American Medical Women's Association. Twenty-three other women in 20 schools graduated in the top ten of their classes. A look at some of the award winners gives a fair picture of how women handle test-tubes, husbands, and babies and still come out with honors.

At the University of Tennessee College of Medicine, for instance, Dr. Ray Schwab Greenberg, Memphis, led her classes for all four years. Oddly enough, she also spent three and a half years at Barnard College studying economics.

"I was almost ready to graduate when I decided I wanted to become a physician," she said. She was lucky to have had a cooperative journalist husband who moved with her when she entered Memphis State College for premedical work. She said he "hasn't objected to washing dishes and doing other household chores. He has been a constant source of encouragement. Our daughter, 5½-year-old Danielle, also has done her part by being reasonably quiet while I studied."

Another award winner overcame infantile paralysis—which left her with a shortened left leg—to become a college basketball player, lifesaving and swimming instructor, and top scholar for all four years in a class of 100. She is Dr. Mary Lou Hoover, Timberville, Va., graduate of the Medical College of Virginia at Richmond. After internship in Colorado she will enter an even more rugged life as a rural Virginia doctor.

One of the two Drs. Usher entering internship at Philadelphia Hospital is a lovely blonde who won the French government award for excellence in French at McGill University—Dr. Martha Wells Usher. At McGill she met the other Dr. Usher, her husband Robert, from Montreal, Canada. Dr. Martha

(Continued on Page 14)

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Women Make Unique Records In Medical Field

(Continued from Page 10)

was number one in a class of 153 at the University of Michigan Medical School. Only 5 per cent of her classmates were women. The "weaker half" of the Usher medical team plans to enter pediatrics after they finish their internship together. She is from Ann Arbor, Mich.

Dr. Katharine Emory Spreng, Cleveland, Ohio, followed both her mother's and father's footsteps at Western Reserve University School of Medicine. Her parents are Dwight S. Spreng, M.D., and Elizabeth Dial Spreng, M.D. Dr. Richard H. Young, dean

of Northwestern University Medical School, predicted a brilliant future for Dr. Ethel Frances Young (no relation), of Chicago, who led her classes for the first three years and graduated in first place.

A radio and radar technician for the Army Signal Corps became the first woman in the history of the Medical College of Alabama to graduate in first place. Dr. E. Jean Cowser, one of only two women in her class of 60, was a straight A student. And the Mobile girl captured both of the two prizes open to freshmen—in anatomy and biochemistry.

Dr. Cowser's outside interests might be looked on as a real comment on today's woman in medicine: her hobbies are raising camellias—and fishing.

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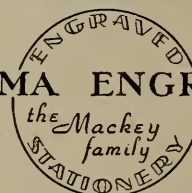
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Because of limited facilities, registration will be limited to 150 "students." Application blanks will be distributed after December 1.

Instructors will be Adaline C. Hayden, R.R.L., associate editor of Standard Nomenclature, A.M.A., and Edward T. Thompson, M.D., Chief of Programs Operation, Hospital Facilities, USPHS, Washington, D. C.

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United States Official Debunks Narcotics Claim

The United States Commissioner of Narcotics recently criticized frequent recommendations that the United States adopt "the British system" of narcotics control. He said there is no difference between the two systems.

H. J. Anslinger, Treasury Department, Washington, said a number of persons have advocated adopting "the British system" of handling drug addicts by allowing physicians to prescribe for them. It has been claimed that the black market for narcotics has been abolished in Britain. Such a statement was recently used by a Columbia University professor on a television program, and the system was recommended by a Citizens Advisory Committee report to the attorney general of California, he said.

"It is now accepted as fact," Anslinger said in a letter to the editor in a recent issue of the *Journal of the American Medical Association*. "Nothing could be further from the truth. The British system is the same as the United States system."

Anslinger said British physicians also are forbidden to dispense or write prescriptions for narcotics except for medical treatment. He said there still is a black market for opium, morphine and meperidine in Britain, and that "British and U. S. systems for enforcing narcotics laws are exactly the same."

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Worms Won't Cause Fits

Among the "old wives' tales" still repeated in mothers' folklore is the notion that worms cause fits. It just isn't so, a Baltimore physician recently stated.

Since there was little information available to disprove the old notion, Dr. George G. Merrill made a study of 200 cases of children proved to have ascariasis. Most of them were of preschool age and about half were under four years old. The majority were underweight, but there was no way of knowing whether this was because of the ascariasis or whether being underweight to begin with made the children more susceptible to the disease. However, good nutrition is important in warding off ascariasis.

Seventeen of the 200 children had had convulsions. This was an incidence of about 8.5 per cent, considerably above the usual incidence—about 0.3 or 0.4—of epilepsy in the general population. However, Dr. Merrill said all but two of these 17 children had had epileptic seizures for months or years before they had worms, and continued to have them after the worms were removed. This would bring the incidence down to about 1 per cent—no more than would be expected among any other group of people, Dr. Merrill wrote in a recent issue of the *American Journal of Diseases of Children*, published by the American Medical Association.



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Navy Men Create Fund for Lost Shipmate

A Navy supply ship crew has contributed a memorial fund to help provide for someone the medical education wanted by a shipmate lost at sea.

The men of the U.S.S. *Achernar* (AKA-53) created the fund in honor of Hospital Corpsman Third Class John Phillip Blackmer, who had hoped to become a doctor.

The fund was sent to the American Medical Education Foundation, a nonprofit organization created in 1951 by the American Medical Association to obtain funds through voluntary contributions to support the nation's medical schools.

The ship's commander, Capt. Charles L. Wertz, U.S.N., said in a letter to the foundation:

"During his period of service aboard this ship, John Phillip Blackmer earned the genuine respect and admiration of all his associates for his professional abilities as a hospital corpsman, and their affection for him as an individual. It had been his

hope, on completion of his current enlistment in the Navy, to finish his college education and to go on to medical school.

"His ability and interest in the care of patients indicated that he would have been a credit to the profession. His untimely death was a great loss to the profession, as well as to the Navy and to all who knew him.

"It is hoped that this memorial fund in the hands of the American Medical Education Foundation will help create for some equally deserving person the opportunity for a medical education that John Phillip Blackmer wanted so much for himself."

The fund, collected among the crew members, totalled \$147.31. It will be placed in the general fund of the A.M.E.F. Dr. George F. Lull, Chicago, vice-president of the A.M.E.F., said "this tribute to John Blackmer, who faithfully served his shipmates as a hospital corpsman, should be an inspiration to any young man who desires to be a doctor—one of the noblest professions serving mankind.

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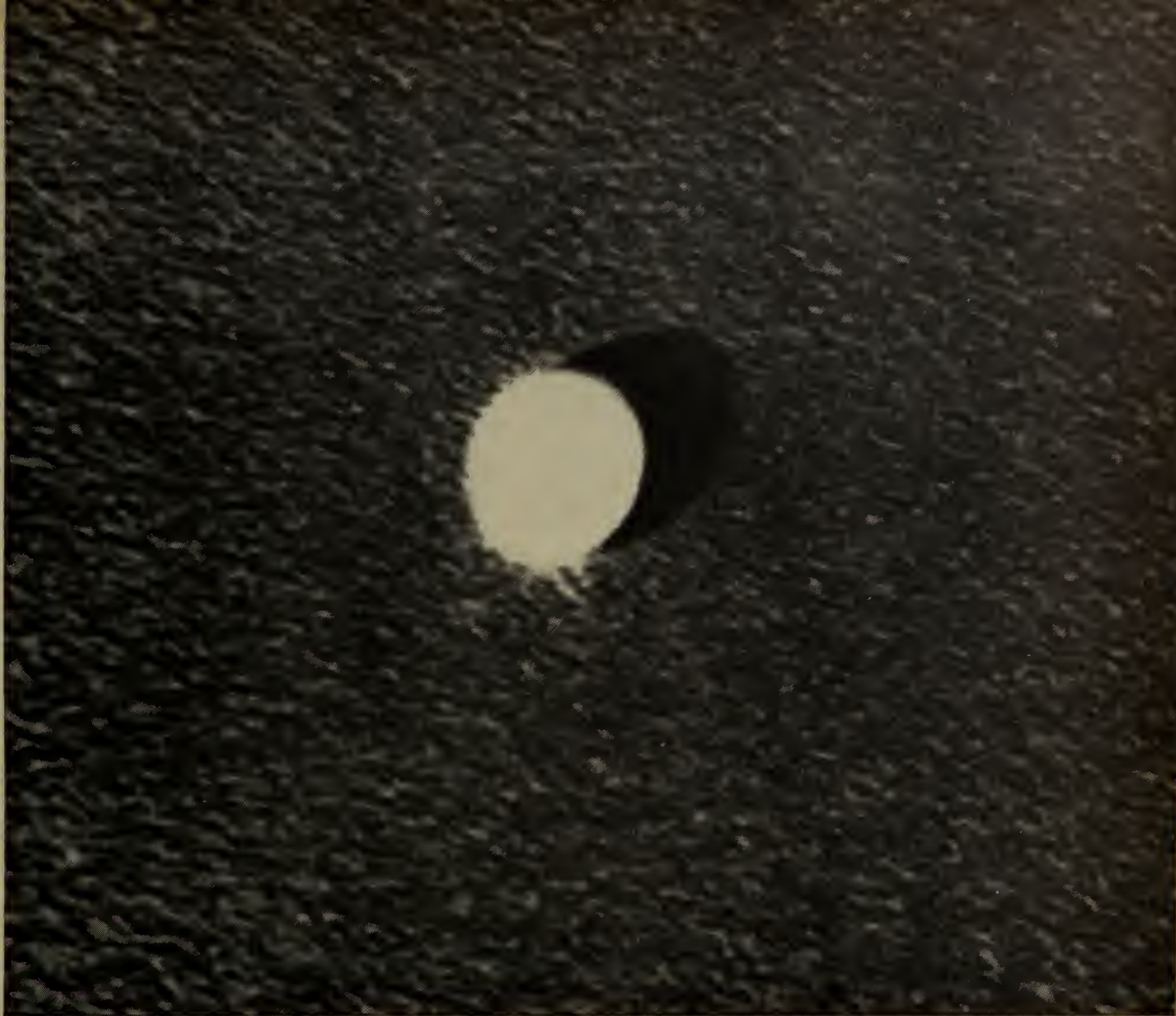
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Migraine Headaches May Be Inherited

Persons whose parents both suffered from migraine may have about a 70 per cent chance of getting the headaches too, it was reported recently.

Physicians, as far back as 1873, have theorized that this kind of headache runs in families. Three New York researchers now have made a study which they said supports the theory that the malady is inherited. If both parents have headaches, the trait may show up in about 70 per cent of their children, they said. If only one parent suffers headaches, the percentage drops to about 17.

The study was described by Helen Goodell, B.S., Richard Lewontin, Ph.D., and Harold G. Wolff, M.D., of Columbia and Cornell universities, in a recent issue of the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

They studied the "family pedigree"—information about relatives—of 119 persons having migraine, and found 343 persons who suffered headaches. Twenty of the patients had no relatives with migraine; 66 had one to three; 22 had from 4 to 7, and 11 patients had from 8 to 19 relatives with migraine.

In families where migraine occurred, there were 832 children. Among 265 of them having neither parent with migraine, 76, or 28.6 per cent, had headaches; of the 502 having one parent with migraine,

222, or 44.2 per cent, had migraine; and of the 65 persons both of whose parents were affected, 45, or 69.2 per cent, had migraine headaches.

Incidence of migraine in the general population has been estimated at between 5 and 22 per cent. However, they said that "complaint of pain in the head from a variety of causes can be elicited from about 85 per cent of the population." Migraine headache follows a general pattern, usually beginning with pain on only one side of the head which may become general later. Attacks may last from less than an hour to several days, and are associated with loss of appetite, nausea, vomiting, seeing difficulty and mood changes, and sometimes with paleness, sweating, chills and dizziness.

The New York researchers commented that they assume migraine is inherited, but that the trait might show up in one environment and not in another. Just hearing both parents mention attacks of migraine could influence migraine in a child, they said.

Almost 400,000 nurses now are on active duty in the United States, an increase of 16,000 in five years, according to a Public Health Service survey. The ratio of nursing personnel to patients is at an all-time peak, 74 per 100, yet the need for more nurses justified the present annual student nurse recruitment goal of 55,000.

—A.M.A. Washington Letter



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New Uses Found for Cortisone

Cortisone, a hormone used in treating rheumatoid arthritis, rheumatic fever, and some allergies, has been found useful in treating two serious infectious diseases.

Physicians in Bombay, India, working with an American visiting professor—a member of the World Health Organization—found that cortisone helped reduce spasms, breathing difficulty, muscle rigidity, fever, and deaths from tetanus, commonly known as lockjaw.

Tetanus occurs frequently in tropical areas and when symptoms quickly follow injury there is little chance of recovery, they said. They treated 20 cases of severe, quick-acting tetanus with cortisone injected and taken by mouth, and hydrocortisone, a similar hormone, by mouth. Eight patients survived, including six who received cortisone by mouth and two who received hydrocortisone. Only three of 20 similar patients not given hormones survived.

Three Philadelphia physicians said cortisone helped reduce such symptoms as fever, mumps-like swelling, and eye inflammation accompanying sarcoidosis. This disease, whose cause is unknown, often results in long-term disability, blindness or death. The “most dramatic response” to cortisone was in patients with swelling and fever, and the response of those with eye infections “was almost equally prompt and striking.”

The physicians said that although cortisone often brought “marked” improvement from these and other symptoms in 35 of the patients treated, it favorably influenced the disease itself in only a minority. They noted, however, that their study may help in finding clues to the cause of the disease. They said patients’ responses to the hormone suggested that sarcoidosis is not an infection, as it is regarded by some investigators.

The two reports were made in a recent issue of the *Journal of the American Medical Association* by Drs. Roger A. Lewis, Baltimore; Rajaninath S. Satoskar, Gopalkrishna G. Joag, Bhachandra T. Dave, and Jamnauas C. Patel, all of Bombay, India, and by Drs. Harold L. Israel, Maurice Sones, and Dick Harrell, Philadelphia.

Three other physicians sounded a warning note about prolonged treatment with cortisone and another hormone, corticotropin. Drs. Paul H. Curtiss, Jr., William S. Clark, and Charles H. Herndon, Cleveland, said they believed bone fractures suffered by four patients studied were the result of overlong treatment with the hormones, which tended to remove minerals from the skeleton.

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1. Co Tui, Minutes of the Conference on Metabolism, Aspects of Convalescence, Including Bone and Wound Healing. Josiah Macy, Jr., Foundation, 5th Meeting, Page 57, 1943.

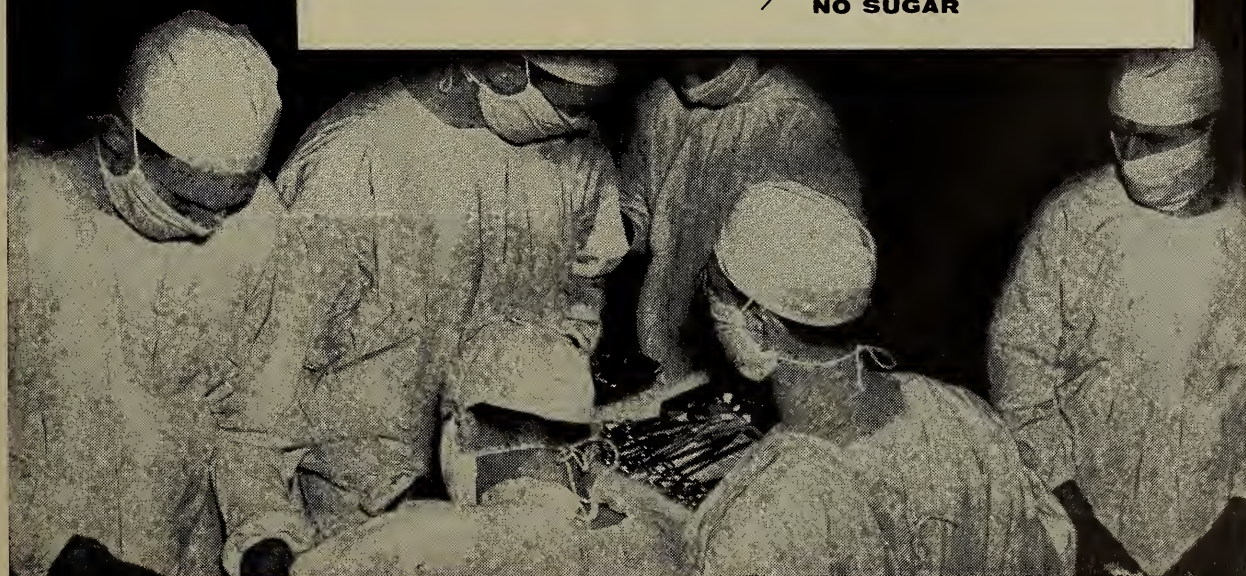
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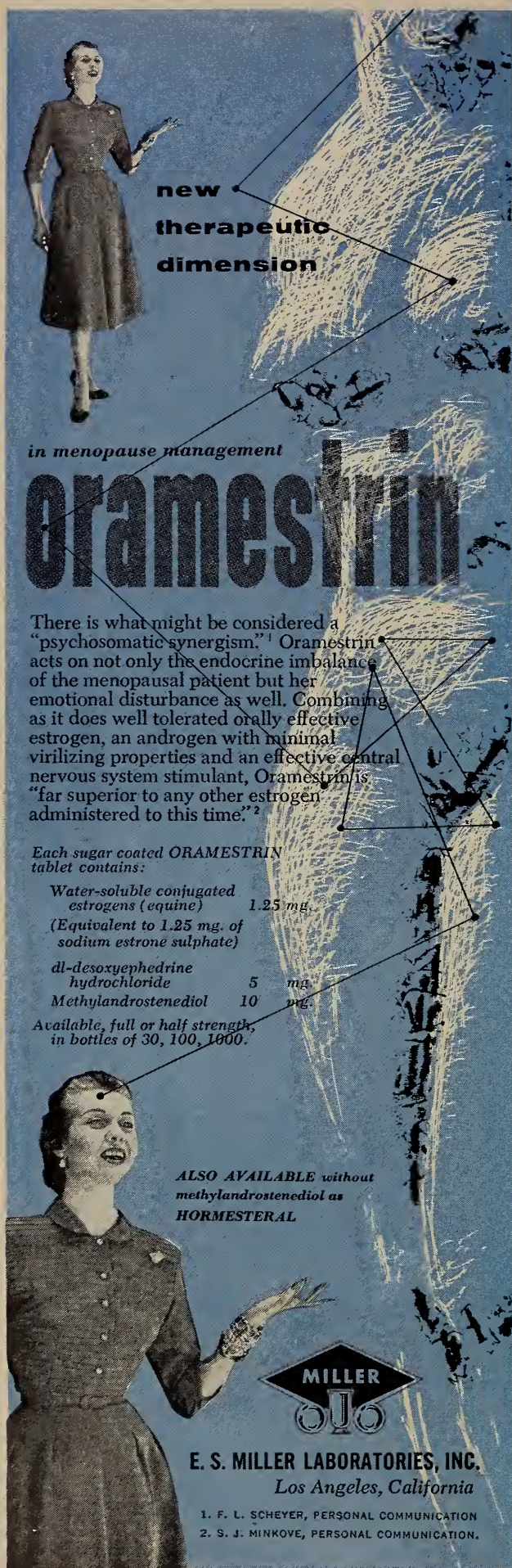
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Paralysis Agitans Patients Easy to Treat

It has been claimed that in this country over a million persons—mostly older ones—suffer from paralysis agitans, also known as Parkinson's disease, or "shaking palsy." Most of them can easily be treated and can even continue to work, a New York City physician reported.

What is most important is that they remain under a physician's care, and learn that employment will not weaken muscles and hasten paralysis. In fact, the disease never results in paralysis, while work and exercise can prevent pain and deformity.

Dr. Lewis J. Doshay, of the Parkinson Research Laboratory, Columbia-Presbyterian Medical Center, said most sufferers from paralysis agitans are easy to treat because "they expect so little and are appreciative of any help rendered," and because they have long periods when the disease is not active. But he said chemical, physical and psychological treatment must be a continuous process. With treatment, some patients can live comfortably for 10 to 30 years after onset. The disease is mainly characterized by tremors in resting muscles, slowed movements, muscle weakness and some peculiarities of walk and posture.

Dr. Doshay wrote in a recent issue of the *Journal of the American Medical Association* there are some "problem cases" but that medical care and psychological aid can prevent them from becoming unemployed, depressed, or from feeling they are too much of a burden to the family.

Parkinson patients can be cheered by evidence that they are less susceptible to many other diseases than the average person in the same age group. Although three or four patients in a hundred have a mild form of diabetes, and fractures are frequent, most patients have normal or low blood pressure and paralysis agitans seems to keep high blood pressure within safe limits. Few have heart complaints, and Parkinsonism seems to control the illness among those who do.

For unknown reasons, cancer is "phenomenally rare" among these patients, despite the fact they are usually in the most cancer-susceptible age period. Only one proved instance of cancer, and not a single case of tuberculosis, appeared during twenty years among thousands of patients. Ulcers are also extremely rare.

Dr. Doshay said these patients should remain under medical supervision to prevent the disabling effects of neglect. If possible, every one should be seen at monthly intervals for treatment and advice on family and personal problems. Finally, they should learn that employment will not weaken their already weakened and rigid muscles.

"Such patients should be advised that the entire

(Continued on Page 40)



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1. Fetter, T.R., Delaware State Med. J. 25:309, Nov. 1953.

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Paralysis Agitans Patients Easy to Treat

(Continued from Page 38)

illness is practically no more than rigidity of the muscles, that there is never paralysis in this illness, and that the more they use the muscles the less chance there is for the development of shortened and contracted muscles that produce pain and deformity," he said.

"They should be told that: Just as running water never freezes, so moving muscles never freeze, shorten, or ache," he said. "Every possible effort should be made to maintain patients with paralysis agitans as long as possible in a vocationally or functionally useful role."

Disease Caused by Cocksackie Virus Discovered

The identification of the Cocksackie virus in 1948 put scientists in an extraordinary position: they had found a disease-causing virus before they discovered what diseases it caused. Three Pennsylvania researchers now say they have found one Cocksackie-caused disease.

They report evidence that one type of Cocksackie virus appears to cause a mild form of aseptic meningitis, an inflammation of the membranes enclosing the brain and spinal cord, the cause of which has not been known.

(Continued on Page 44)

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Disease Caused by Coxsackie Virus Discovered

(Continued from Page 40)

Klaus Hummeler, M.D., Philadelphia; Daniel Kirk, M.D., Elwyn, Pa., and Mykola Ostapiak, Philadelphia, reported their findings in a recent issue of the *Journal of the American Medical Association*.

This disease organism was isolated in 1948 after an outbreak of what appeared to be nonparalytic polio in the town of Coxsackie, N. Y. It later was divided into groups A and B according to their effects on experimental animals. There is strong evidence that the group A is connected with a fever

disease called herpangia, while group B causes epidemic pleurodynia (also known as Bornholm disease or devil's grip) which brings sharp pains in the chest or abdomen, and is much like nonparalytic polio.

But heretofore investigators weren't able to say specifically that Coxsackie virus was the cause of any particular disease or syndrome. The virus has been found in patients suffering central nervous system disorders together with a Coxsackie infection. But physicians could not tell whether the infection and the nervous system involvement were both caused by the virus. The only sure way of telling would be to

(Continued on Page 48)

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Disease Caused by Cocksackie Virus Discovered

(Continued from Page 44)

find Cocksackie virus in the spinal fluid of such a patient. This apparently has been reported only once.

The Pennsylvania investigators say they had isolated the virus in the spinal fluid of a patient with aseptic meningitis. He was one of 11 persons in a mental institution who were stricken by a Cocksackie virus infection. All showed symptoms and spinal fluid changes like those in cases of aseptic meningitis. Cocksackie virus group B was found in six of the 11 patients by various methods, including

the one virus isolation from spinal fluid. Other evidence supported the conclusion that the aseptic meningitis was caused by the group B virus, they said.

All of the patients recovered, and the researchers said the evidence proves that the group B Cocksackie viruses, commonly associated with pleurodynia, also can invade the nervous system and cause a mild meningitis.

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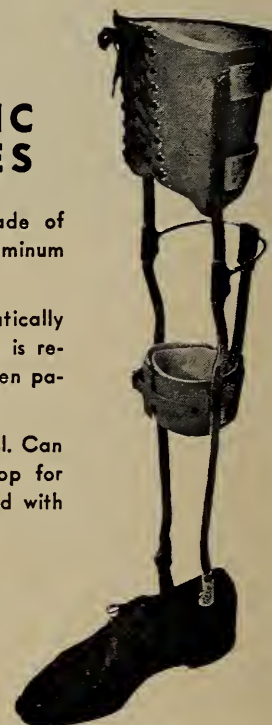
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Pulmonary Mycotic Infections

Allergic and Immunologic Factors

EDMUND L. KEENEY, M.D., San Diego

• *The mechanisms of immunity and allergy, at play in every infectious disease, must be comprehended before the pathogenesis of an infection can be appreciated.*

Immunity, allergy and serology are concerned with specific antigen-antibody reactions. In immunity the principal concern is with the final disposition of antigen (agglutination, lysis, and phagocytosis). In allergy attention is focused upon tissue damage resulting from antigen-antibody union. In serology interest is devoted to the presence of antibody as evaluated by certain visible in vitro reactions—precipitin, agglutination, opsonization and complement fixation tests.

There are two types of allergic reaction—the immediate or anaphylactic type and the delayed type or the allergic disease of infection. Neither kind takes part in the mechanism of immunity. At this time the allergic antibody

and the immune antibody must be considered as two different and distinct antibodies.

Skin and serologic tests are important diagnostic aids in certain pulmonary mycotic infections—for example, coccidioidomycosis, blastomycosis, histoplasmosis and moniliasis.

Clinical expressions of allergy may appear in coccidioidomycosis, histoplasmosis and moniliasis.

Pulmonary mycoses are divided into three groups, that is, the endogenous mycoses (actinomycosis, moniliasis, geotrichosis), the endogenous-exogenous mycoses (cryptococcosis, aspergillosis, mucormycosis) and the exogenous mycoses (nocardiosis, coccidioidomycosis, histoplasmosis, North American blastomycosis).

The diagnosis and treatment of the important mycotic infections that invade lung tissue are discussed.

To APPRECIATE the pathogenesis of an infectious disease it is essential to have knowledge concerning the mechanisms of natural immunity, acquired immunity and allergy pertinent to the infection under consideration. Such data are not available for all infections but it is helpful to project accessible information for the better understanding of the infectious processes that have not as yet been exhaustively studied. Although these data are available for

certain bacterial and viral infections, there is a paucity of information of this kind with regard to mycotic infections, for they have been less carefully scrutinized than the bacterial and viral diseases.

In any discussion dealing with immunity and allergic sensitivity it is imperative to understand what is meant by the terms *antigen* and *antibody*. Antigens are substances of protein or polysaccharide nature which, upon injection into an animal body, stimulate the formation of antibodies. A molecule to qualify as an antigen must have a molecular

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weight of 10,000 or more, and possess upon its surface a repetition of certain chemical groupings. These chemical groupings determine the specificity of the antigen, and the most important constituent of a group is an acid radical. Any one invading microorganism may be likened to a bag filled with an assortment of different antigens.

An antibody is a plasma globulin molecule. Antibodies, except for their ability to react specifically with antigen, are frequently the same as normal gamma globulin. The concentration and character of antibodies may be assessed by their physicochemical properties; for instance, precipitation by salts, analysis in the ultracentrifuge, and analysis in the Tiselius electrophoresis cell. The presence of antibodies may also be evaluated by a number of serologic reactions. There are five major manifestations of antibody existence to be noted visibly by serologic reactions: (1) antibodies may precipitate soluble antigens (precipitin test); (2) antibodies may cause the aggregation of antigens, if the antigen is in particulate form as part of a bacterial or other cell (the agglutination test); (3) antibody plus the component of normal serum known as complement may cause cells representing antigen to undergo lysis; (4) antibody may bring about a combination of antigen, such as bacteria and other cells, so as to make phagocytosis by leukocytes and macrophages much more effective (the opsonization test); (5) antibody combined with almost any antigen will absorb complement even though the union be an invisible one (the complement fixation test).

There is still a tendency to ascribe the various serologic reactions to the activity of a particular kind of antibody. It is not uncommon to see statements in the literature that "precipitating antibodies," "complement fixating antibodies," and "agglutinating antibodies" are formed during the course of an infection. Such statements simply infer that separate and distinct antibodies are responsible for each of the serologic reactions. This is not always the case. A single antigen in pure state produces only one variety of antibody, and this antibody present in the serum is capable under proper conditions of combining with antigen to produce a variety of serologic reactions. It is not meant to imply, of course, that only one antibody is produced in the body response to invasion by a microorganism; every microorganism is a mixture of many antigens.

The site of antibody globulin formation in the body probably depends upon the nature of the antigen and the route of entrance into the body. At present it is believed that three kinds of cells take part in the manufacture of antibody: reticuloendothelial cells, plasma cells, and lymphocytes.

There are loose concepts in the minds of many that the measure of antibody concentration (titer) by serologic tests measures also the degree of im-

munity. Although the antibodies responsible for eliciting serologic reactions are the same antibodies that neutralize the virulent properties of an offending microorganism, resistance to infection is not always due to antibody. However, serologic reactions do give clues at times to the nature of the potential protective activities of antibodies *in vivo*, and they are of course of great value in providing methods for diagnosing the existence of an infection. The precipitin, the agglutination, and the complement fixation tests are used with advantage in the diagnosis of certain mycotic lung infections. In not a single instance of a fungous infection do these tests measure immunity.

The concepts of the mechanisms of acquired resistance (immunity) are fairly simple ones. The offending organism is possessed of ability to overcome the native resistance of the body, and this act gives the microorganism virulence. The host then acquires antibodies which neutralize the virulence properties; hence the microorganism is finally at the mercy of the body's defenses (phagocytic properties of leukocytes and macrophages). In this scheme we are concerned with a specific antigen-antibody reaction, and our attention is directed particularly toward the final disposition of the antigen.

In all infectious diseases it is not always possible to correlate the presence of antibodies with the immune state. Some other mechanism may function as the harbinger of resistance in place of antibody. For example, humoral factors other than antibodies may be acquired and give resistance, and alterations may take place in the phagocytes which enable them to destroy microorganisms more effectively.

The study of allergy also deals with specific antigen-antibody reactions. In the mechanism of the allergic reaction we are not concerned with what happens to the antigen; we are interested in what happens to the tissue as a result of the antigen-antibody reaction.

As one examines the various manifestations of allergy in man one becomes aware of the different types of reactions and the manner in which these reactions are induced in an allergic person. Some forms of allergic reaction (immediate or anaphylactic type) may be induced by the entrance of a simple antigen into the tissues. Other forms of reaction (delayed type or allergic reaction of infection) are dependent upon the entrance of entire infectious agents into the body.

In the kind of allergy that is established by ordinary and simple antigens, the subsequent response to the same antigen takes place immediately. It is allergy of this type that is present in patients with hay fever, asthma, urticaria, eczema, serum disease, erythema nodosum, erythema multiforme, migrating phlebitis, periarteritis nodosa, rheumatic fever and possibly acute glomerulonephritis. Persons with al-

TABLE 1.—Endogenous pulmonary mycoses.

Disease	Geographical Distribution	Organism	Source	Appearing in Sputum as—	Identified by Cultured Growth on—
Actinomycosis	World wide	<i>Actinomyces Israeli</i>	Tonsils, gums	"Sulphur granules"	Brewer's Thioglycolate medium, 37° C.
Moniliasis	World wide	<i>Candida albicans</i>	Mouth, skin, vagina, gastrointestinal tract	Budding yeast cells, Mycelia	Sabouraud's 30° C.
Geotrichosis	World wide	<i>Geotrichum</i> sp. (species not identified)	Mouth, gastrointestinal tract	Rectangular and spherical cells	Sabouraud's 30° C.

TABLE 2.—Endogenous-exogenous pulmonary mycoses.

Disease	Geographical Distribution	Organism	Source	Appearing in Sputum as—	Identified by Cultured Growth on—
Cryptococcosis	World wide	<i>Cryptococcus neoformans</i>	Soil, skin	Budding yeast cells with wide capsules	Sabouraud's 30° C.
Aspergillosis	World wide	<i>Aspergillus fumigatus</i> (at times, other species)	Soil, grains, grasses, respiratory tract	Broken fragments of mycelium. Small, round conidia	Sabouraud's 30° C.
Mucormycosis	World wide	<i>Mucor corymbifer</i> (at times, other species)	Soil, skin, respiratory tract	Fragments of non-septate mycelium	Sabouraud's 30° C.

lergy of this type have humoral antibodies that may be transferred by means of their serum to normal individuals. Only certain cells of the body become sensitized and take part in the allergic reaction; for example, endothelial cells, smooth muscle cells and collagen. These manifestations are regarded as characteristic of the immediate or the anaphylactic type of allergic reaction.

In the kind of allergic reaction which is dependent upon invasion by the entire infectious agent there are definite characteristics which separate it from the immediate type: The reaction of the tissues to antigen is delayed; humoral antibodies are not present; any cell of the body may be destroyed following contact with antigen. This type of allergic reaction, spoken of as the delayed type or the allergy of infection, is responsible for the tissue damage in tuberculosis, coccidioidomycosis, histoplasmosis, blastomycosis, sporotrichosis, moniliasis and many other infectious diseases. The presence of this kind of allergy is demonstrated by delayed positive reaction to skin test with antigenic materials such as tuberculin, coccidioidin, histoplasmin or blastomyces vaccine.

What then may be the relationship of allergy to immunity? The allergic reaction could be of assistance to the body in resisting an invading micro-organism if the antibody responsible for the allergic reaction were also the antibody responsible for resisting the invasion and progress of the micro-organism. However, this possibility has never been substantiated. It must be concluded at this time that the allergic antibody and the immune antibody are not the same, but are two different antibodies.

The allergic reaction, whether immediate or delayed, might aid resistance to infection if the intense inflammation produced by the allergic reaction could restrict the spread of an infectious agent. Although

it must be generally conceded that inflammation is helpful to the body in impeding the spread of micro-organisms by calling forth rapidly an accumulation of phagocytes, it does not necessarily follow that the exaggerated inflammatory reaction of allergy amplifies protection. It has been ably demonstrated that organisms begin to spread before the allergic reaction takes place and, furthermore, the organisms are spread with the rush of fluids that accompany the violent inflammation. Thus the milder inflammation provoked by the antigenic stimulus in nonallergic tissue is more protective in its localizing attributes than the intense inflammatory reaction of allergy.

There is, therefore, no evidence at this time to consider the allergic reaction as a part of the mechanism of immunity in infectious diseases.

With these fundamental thoughts in mind with regard to allergy, immunity and serologic reactions, one is in a better position to appraise the pathogenesis of infectious diseases. Hence, the signs and symptoms produced by mycotic infections and the diagnostic significance of serologic and skin reactions in these diseases can be more fully appreciated.

The pulmonary mycoses may be divided into three groups, the endogenous mycoses, the endogenous-exogenous mycoses and the exogenous mycoses. Actinomycosis, caused by *Actinomyces Israeli*, moniliasis caused by *Candida albicans*, and geotrichosis caused by species of *Geotrichum* are considered to be endogenous mycoses (Table 1). The fungi responsible for these infections may and do live in various regions of the human body without becoming parasitic. *Actinomyces Israeli* may be found in tonsillar crypts, in dental scum and about carious teeth. *Candida* species are inhabitants of the normal mouth, intestinal tract and vagina, and may be cultured from these sites in 35 to 40 per cent of normal persons. *Geotrichum* species are frequently isolated

TABLE 3.—Exogenous pulmonary mycoses.

Disease	Geographical Distribution	Organism	Source	Appearing in Sputum as—	Identified by Cultured Growth on—
Nocardiosis	World wide	<i>Nocardia asteroides</i>	Soil	Granules. Short and long fragments of mycelium "Spherules"	Veal infusion agar (1% glucose). Sabouraud's 30° C. Sabouraud's 30° C.
Coccidioidomycosis	Southwest U.S.A., Northern Mexico, Argentina	<i>Coccidioides immitis</i>	Soil		
Histoplasmosis	Central U.S.A. In other specific areas of world	<i>Histoplasma capsulatum</i>	Soil	Small yeast-like cells	Sabouraud's 30° C. (cottony). Blood agar 37° C. (yeast-like)
North American Blastomycosis	Southeast U.S.A., Central U.S.A., North America	<i>Blastomyces dermatitidis</i>	Soil	Doubly contoured, granular, budding cells	Sabouraud's 30° C. Blood agar 37° C. (yeast-like)

TABLE 4.—Mycotic infections in which allergy and serology in reactions are important.

Disease	Organism	Clinical Expressions of Allergy	Laboratory Expressions of Allergy Skin Tests with:	Serologic Reactions		
				Precipitin Test Positive	Fixation Test Positive	Agglutination Test Positive
Coccidioidomycosis	<i>Coccidioides immitis</i>	In primary phase: Morbilliform rash, erythema nodosum, erythema multiforme, arthralgia, phlyctenular conjunctivitis	Coccidioidin: Positive	Yes	Yes	Not suitable
Histoplasmosis	<i>Histoplasma capsulatum</i>	In disseminated form: Purpura, urticaria, erythema	Histoplasmin: Positive	Not evaluated	Not evaluated	Not evaluated
North American Blastomycosis	<i>Blastomyces dermatitidis</i>	0	Blastomycin and blastomycosis vaccine: Positive	Yes	Yes	Not suitable
Moniliasis	<i>Candida albicans</i>	Asthma, urticaria, eczema	Candidin and Candida vaccine: Positive	Yes	Not evaluated	Yes

from the mouths and the intestinal tracts of patients without disease. The native resistance of the body prevents these microorganisms from becoming invasive. However, native resistance is flexible and in certain circumstances these same fungi may surmount all barriers and proceed to invade, multiply and disseminate through the body. In these respects the endogenous fungi act in a manner similar to staphylococci and streptococci.

There are certain mycotic diseases that may be endogenous as well as exogenous and these are: cryptococcosis, aspergillosis and mucormycosis (Table 2). *Cryptococcus neoformans* has been isolated from apparently normal skin and soil; species of *Aspergillus* are found in the respiratory passages of patients with chronic bronchitis and asthma and in soil and on grains and grasses; species of *Mucor* have been isolated from the respiratory passages and skin of normal persons and in soil.

The endogenous and the endogenous-exogenous fungi, excepting *Actinomyces Israeli* and *Cryptococcus neoformans*, become more virulent when the relationship of the normal flora of the body and their environment is altered by the prolonged administration of the wide spectrum antibiotics.

The exogenous fungi (Table 3) survive and multiply in soil or on plant material. Of the four strictly exogenous mycoses only one, nocardiosis, is rather evenly distributed throughout the world. The remaining fungous infections (coccidioidomycosis,

histoplasmosis, blastomycosis) occur predominately in certain restricted geographical areas. These three mycotic infections have certain common characteristics. For example: They occur mostly in the United States; the gross cultural characteristics of two of the causative organisms (*H. capsulatum*, *B. dermatitidis*) are similar; the allergic reaction of delayed type develops during the course of infection; with moniliasis, they are the only mycotic infections in which a positive reaction to a skin test is a diagnostic attribute; two of the mycoses (coccidioidomycosis, histoplasmosis), with moniliasis, are the only mycoses that have clinical manifestations of the allergic reaction of immediate type during the course of infection; two of the mycoses (coccidioidomycosis, blastomycosis), with moniliasis, are the only mycoses which during the course of infection stimulate the production of the immune type of antibody and they are, therefore, the only mycotic infections in which serologic tests are of diagnostic aid (Table 4). These similarities are recalled not with the purpose of relating the organisms or the infections to one another but expressly to stimulate a scheme of simple thinking about a subject which somehow or other has been made unnecessarily forbidding.

The various mycoses in which pulmonary disease is an important feature will now be discussed individually. No longer do these infections play an unimportant and remote position in medicine and public health. Mycotic infections occur with sufficient

frequency to justify consideration of them in the differential diagnosis of every difficult and complicated pulmonary infection, and even, under certain circumstances, in supposedly benign and simple respiratory diseases.

THE ENDOGENOUS PULMONARY MYCOSES

ACTINOMYCOSIS

The term actinomycosis should refer only to infections that are caused by the anaerobes *Actinomyces Israeli* and *Actinomyces bovis*. Until the appearances of the studies of Erikson,¹¹ of England, and later Thompson,²⁸ of the Mayo Clinic, it was the opinion of the majority of investigators that human and bovine actinomycosis were caused by the same anaerobic microorganism, and depending upon the investigator the organism was referred to either as *Actinomyces bovis* or *Actinomyces Israeli*. However, since the appearance of the sixth edition of "Bergey's Manual of Determinative Bacteriology" in 1948, *Actinomyces Israeli* has been catalogued as the cause of actinomycosis in human beings, and *Actinomyces bovis* as the etiologic microorganism of the bovine infection.

Actinomyces Israeli commonly exists as a saprophyte in the oral cavity and has never been isolated from soil or vegetation. In the mouth the organism is commonly present in and about carious teeth, dental scum, and the crypts of tonsils. From such positions, the organisms may be inhaled or aspirated into the lungs to incite pulmonary infection.

Diagnosis. The primary lesions in pulmonary actinomycosis are usually bilateral and basal, but they may occur unilaterally in any portion of the lung. In the primary site a granulomatous process is induced which usually extends to the mediastinum, pericardium and heart, and/or to the pleura producing pleural pain and occasionally pleural effusion. Eventually the organism invades directly through the pleura to the chest wall, giving rise to numerous draining sinuses. Infrequently the pulmonary infection will be the result of a spread from the primary focus in one or more of the ribs. Rarely in pulmonary actinomycosis is there a spread to the regional lymph nodes, but metastasis by the blood stream to any part of the body may occur.

The diagnosis is established in the laboratory by isolating from the sputum the organism in the form of characteristic "sulphur granules." These granules vary in size and shape and have a radiating lobulated structure and usually, although not always, are yellow in color. They are best observed with a low power microscope lens, but occasionally are large enough to be identified macroscopically or with a hand lens. The interior of the granule does not stand out sharply, but the clubs of the periphery are very refractile and appear as irregular lines marking the

borders of the lobules. By crushing the granule between two slides and then staining with Gram's stain, the Gram-positive branched filaments can be demonstrated. These branched filaments make up the interior of the "sulphur granules."

Actinomyces Israeli is difficult to culture. The sputum should be washed several times with sterile normal saline solution. Suspected granules should be recovered with a bacteriological loop, washed again in sterile normal saline solution, and then placed in Brewer's thioglycollate medium and incubated at 37° C. Colonies that gradually develop appear as fluffy discrete masses of variable size suspended in the media. Mycelia do not project from the surface.

A satisfactory antigenic substance, prepared from the organism or from the broth in which the organism has been grown, has never been isolated. Therefore, skin tests and serological tests, which would be of doubtful diagnostic value anyway for this infection, are not performed.

Treatment. Treatment for the most part is unsatisfactory and consists of indicated surgical drainage, the administration of potassium iodide to the point of intolerance, and x-ray therapy. There are numerous clinical reports in the literature proclaiming the effectiveness of sulfonamides,²² penicillin,¹⁹ aureomycin¹⁷ and chloramphenicol.¹⁶ In the majority of these reported cases surgical measures, iodides, and x-ray therapy supported the sulfonamide and antibiotic therapy, and it is, therefore, impossible to ascribe the entire clinical result to the use of these latter drugs. It must be concluded that necessary surgical intervention, adequate x-ray therapy, and intensive iodide administration are essential adjuncts to antibacterial and antibiotic therapy if optimal results are to be obtained in the treatment of this serious pulmonary infection.

MONILIASIS

Mycologists have replaced the familiar generic term *Monilia* with the name *Candida*. However, the term *moniliasis*, because of its common usage in the medical literature, has been retained in spite of suggestions that *candidosis* or *candidiasis* might be more appropriate. There are seven important species in the genus *Candida* and these are: *albicans*, *tropicalis*, *pseudotropicalis*, *Krusei*, *parakrusei*, *stellatoidea*, and *Guilliermondi*. Only one of these species, *albicans*, is commonly pathogenic for man.

Diagnosis. *Bronchopulmonary moniliasis* is the term employed to designate that type of *Candida* infection of the lungs in which the disease process is limited to the bronchial tree. Infection of this type, which is not at all uncommon, is manifest clinically by the signs and symptoms of ordinary bronchitis. The temperature may be normal or only slightly elevated, and the health of the patient not seriously affected. Pulmonary roentgenograms re-

veal slight to moderate peribronchial thickening. The infection may disappear spontaneously or become chronic and thereby mimic the symptoms of chronic bronchitis of bacterial origin.

Pulmonary moniliasis is the term for infections of the parenchyma of the lungs. While the parenchymal is not so common as the bronchial infection, it is more serious. Pulmonary moniliasis may resemble miliary tuberculosis with cough, fever, dyspnea, pain in the chest, hemoptysis and night sweats. There may be signs of pleural thickening. Areas of consolidation resembling bronchopneumonia may be scattered throughout two or more lobes and, infrequently, there may be lobar consolidation.

The diagnosis of bronchopulmonary and pulmonary moniliasis is fraught with difficulties. Isolation of the organism, particularly if the patient has received antibiotics, is not conclusive. The organism frequently establishes itself in the bronchial mucous membranes as a secondary invader. A diagnosis must be made indirectly by excluding all other conditions, infections and neoplasms that might affect the bronchial and parenchymal tissue, and by repeated demonstration of the organism in the sputum. Actually there are no indisputable criteria for establishing the diagnosis short of the impractical procedure of lung biopsy.

Clinical manifestations of allergic reaction of the immediate type may develop during the course of a *C. albicans* infection. Bronchial asthma was reported by the author¹⁴ to have followed a bronchial infection. The asthmatic symptoms completely disappeared with the alleviation of the infection. The author¹⁵ has also observed the development of urticaria in a patient with cutaneous moniliasis. The author¹⁵ likewise has observed in the past year the development of typical allergic eczema in a two-year-old child one month following the administration of aureomycin. *C. albicans* was isolated from the stools. After the organism was eliminated from the gastrointestinal tract the skin became normal. Eczematoid dermatitis of the face and certain cases of miliaria are thought to be allergic reactions to *Candida* infections. Vesicular lesions on the hands, referred to as moniliids and similar in appearance to dermatophytids, are the result of allergic reactions to infections occurring elsewhere in the body.

Agglutinins and precipitins are occasionally present in the serum of patients with the severe forms of *Candida* infections. However, there are agglutinins for *C. albicans* in the serum of many normal persons. Therefore, serologic tests are of doubtful diagnostic importance. Skin tests are of no value because positive reactions occur in a large proportion of patients without active infection.

The laboratory diagnosis of moniliasis is established by isolating from the sputum budding cells and filaments, and by growing the organism in pure

culture form on Sabouraud's agar. On Sabouraud's medium the organism grows as a yeast, but when stab cultures are made in gelatin or corn meal agar the mycelial form of the fungus is produced. To make certain that the organism isolated is the pathogenic species of *Candida*, it should be tested for fermentation reactions. *C. albicans* will form acid and gas in glucose, acid and gas in maltose, but only acid in sucrose media. Recently a technique was described by Weld²⁹ for the rapid identification of *C. albicans*.

Treatment. Bronchopulmonary moniliasis is best treated with potassium iodide by mouth and sodium caprylate by aerosol. The official solution of potassium iodide should be given in as large a dose as can be tolerated by the patient. One milliliter of a 10 per cent solution of sodium caprylate (New and Non-Official Remedies) should be given by aerosol several times daily. Best results are obtained if a total daily dose of 1 gram is reached.

Pulmonary moniliasis is treated in a manner identical to that of bronchopulmonary moniliasis. Gentian violet should be given intravenously if the patient is not doing well on iodide and caprylate therapy. The dosage is 5 mg. per kilogram of body weight and may be repeated daily or every other day for three to seven doses.

It is usually advisable before administering potassium iodide to give the patient three to four weeks of specific desensitization treatment with *C. albicans* vaccine. The prolonged use of a *C. albicans* vaccine in the management of patients with chronic infections is also advisable.

GEOTRICHOSIS

Geotrichosis is a fungous infection due to one or more species of *Geotrichum*. There has never been a careful study of the saprophytic and pathogenic species of the genus *Geotrichum*. The organism is capable of producing lesions in the mouth, intestinal tract, bronchi and lungs.

Diagnosis. Bronchitis is probably the most frequently recognized manifestation of geotrichosis. The symptoms are identical to those of chronic bronchitis of bacterial origin. The sputum is often gelatinous; the pulse and temperature are rarely elevated; and the general health is good. Medium and coarse rales are noticeable especially at the lung bases. Diffuse peribronchial thickening is a nonspecific condition observed in pulmonary x-ray films.

Invasion of the parenchyma of the lungs brings about signs and symptoms suggestive of pulmonary tuberculosis. The temperature is elevated, the pulse accelerated and the leukocyte content of the blood increased. The sputum is mucopurulent and may or may not contain blood. The physical findings are not specific, but may lead to suspicion of tuberculosis.

Pulmonary roentgenograms reveal patches of infiltration with or without cavity formation.

Microscopic examination of the sputum reveals oblong or rectangular cells with rounded ends and large spherical cells which measure from 4 to 10 microns in diameter. At room temperature on Sabouraud's medium the organism grows rapidly and forms a white to cream colored colony with a dry, mealy surface. Microscopically the hyphae are seen to segment into rectangular arthrospores, which vary in size and roundness of their ends. The rectangular cells ordinarily germinate by a germ tube from one corner. This is a very characteristic finding in cultures of *Geotrichum*.

Treatment. Bronchial infections usually respond rather quickly to iodide by mouth. The official solution of potassium iodide should be administered in the largest dose that can be given with tolerance.

The pulmonary form of the disease should likewise be treated with iodides, but such therapy should not be instituted until tuberculosis has been excluded in the differential diagnosis. If the infection does not respond to iodide therapy an autogenous vaccine should be prepared and immunization carried out. Also in the event that iodides are ineffective, neomycin should be administered. Neomycin has proven effective in the treatment of *Geotrichum* septicemia,¹ and urinary tract infections.¹⁰ It must be emphasized that neomycin is a toxic antibiotic which causes deafness as well as renal damage if administered for more than a short time.

ENDOGENOUS AND EXOGENOUS PULMONARY MYCOSES

CRYPTOCOCCOSIS

The organism responsible for cryptococcosis in man was named *Torula histolytica* by Stoddard and Cutler²⁷ in 1916, and thereafter the disease became known as torulosis. There are now grounds for believing that the organism is not a true *Torula* but instead a *Cryptococcus*. The correct name of the fungus is *Cryptococcus neoformans*, and of the disease it produces, cryptococcosis. However, reports of many cases of this infection will be found indexed under torulosis.

Diagnosis. Clinical manifestations stem from the central nervous system, the respiratory system, the lymphatic system, the skin, the mucous membranes and the bones and joints. Ordinarily a combination of these tissues, rather than just one, is invaded by *C. neoformans*, but the evidence of the involvement of other tissues is usually submerged by the more serious signs of central nervous system disease.

Pulmonary involvement is, in frequency, second only to that of the meninges and brain. It is generally considered that the primary lesion in cryptococcosis occurs in the lungs and that metastasis to

the brain is by way of the blood stream. Cryptococcosis, however, may rarely remain confined to the lung; there are a few reports in the literature attesting this isolation. Of course, it is quite conceivable that pulmonary cryptococcosis might occur without being diagnosed, because few signs or symptoms accompany pulmonary involvement, and the organism is rarely looked for in the sputum unless it has been previously demonstrated in the cerebrospinal fluid. The majority of cases of cryptococcosis of the lungs, therefore, occur in patients who have coexisting lesions in other tissues, especially the central nervous system.

It is common, although not unvarying, for pulmonary cryptococcosis to be accompanied by only meager local and constitutional signs and symptoms. Symptoms when present are those of a cough with some expectoration, and at times with hemoptysis. Occasionally pleural pain may appear or a small effusion be present in the pleural cavity. Rarely does the infection cause disease of clinical severity. Physical signs, if present, are those of bronchitis or of consolidation. Pulmonary roentgenograms are helpful and important in making a diagnosis. In roentgen appearance the lesions may suggest a tumor, a pyogenic abscess or a hydatid cyst. In addition to these shadows there may be linear markings with surrounding woolly shadows, which suggest in turn the findings common in pulmonary moniliasis.

The only exacting proof of pulmonary cryptococcosis is the finding of the organism in the sputum. Fortunately the Ziehl-Neelsen stain is excellent for detecting *C. neoformans* as well as the tubercle bacillus. An India ink preparation of sputum shows up the capsules of the organism brilliantly and thus aids in their identification. Pulmonary cryptococcosis must be differentiated from other chronic lung diseases such as tuberculosis, unresolved pneumonia, pyogenic abscess, bronchitis, bronchiectasis, fibrosis, primary and secondary carcinoma, Boeck's sarcoid, hydatid cyst and other mycotic infections.

On Sabouraud's media at 30° C. the organism grows slowly. At first the growth is moist, smooth, and cream colored. As the culture ages the color changes to yellow and then to brown. A portion of the culture examined microscopically and in an India ink preparation reveals best the wide typical capsules. This capsule takes on a reddish color when the cells are stained by Gram's technique.

The antibody response in cryptococcosis is poor and consequently precipitin, agglutination and complement fixation tests are of no importance in the diagnosis. With regard to the diagnostic significance of skin tests very little work has been done. The poor antibody response which accompanies this infection is undoubtedly partially responsible for the poor prognosis.

Treatment. There is no specific method of treatment, but this does not imply that a hopeless attitude be assumed. In dealing with a case of cryptococcosis chemotherapeutic tests on mice with all promising drugs should be performed. There is always the possibility that the specific strain of *C. neoformans* isolated will be susceptible to one of the sulfonamides, to one of the antibiotics, to actidione, or to some other drug not yet discovered or synthesized.

Immunization with a vaccine of *C. neoformans* should be tried and continued during the entire course of the disease. If possible a weakly encapsulated strain of the organism should be employed in the vaccine, since there is evidence that vaccines prepared from the weakly encapsulated strains are more immunogenic than vaccines prepared from the strongly encapsulated ones.¹⁸

Pulmonary lesions that are isolated and not part of a generalized infection may heal. However, since the infection is very likely to disseminate, early excision of the circumscribed lesion is advisable.²

Cryptococcus neoformans thrives in an acid medium, and it does not survive temperatures of 105° for seven days or of 107° F. for six days. Accordingly, alkalization and hyperthermia have been suggested as possible methods of treatment. Attempts thus far with alkalization have met with failure and hyperpyrexia has not been adequately tried.

ASPERGILLOSIS

Species of *Aspergillus* are widely distributed in nature and, for the most part, may be considered as saprophytes. Occasionally some species become parasitic and produce inflammatory granulomatous lesions in the skin, the external auditory canal, the paranasal sinuses, the orbit, the bronchi, the lungs and, infrequently, in the bones and meninges.

The disease aspergillosis, which is caused for the most part by *Aspergillus fumigatus*, is world wide in distribution and occurs in persons exposed often to massive doses of the spores; for example, farmers exposed to dust from threshers; fur cleaners employing rye flour as a grease remover; and, in France, the squab feeders who take grain into their mouths to moisten it and, coincidentally, inhale spores.

Diagnosis. Primary pulmonary infection is rare and diagnosis is ordinarily made at autopsy. The clinical symptoms and signs may be those of pulmonary tuberculosis, or other mycotic infections that involve the lungs. There is no clinical characteristic that might lead one to suspect the disease process resulting from invasion by *Aspergilli*.

Direct microscopic examination of sputum reveals broken fragments of hyphae with many small, round, dark green conidia. On Sabouraud's agar at 30° C. the organism grows rapidly, appearing first as a white, cottony growth. As the conidia are produced the color of the colony turns to green or dark

green. Microscopic preparations should be made by placing a small portion of the aerial growth in lactophenol cotton blue and covering with a cover slip. The characteristic swollen conidiophore bearing the sterigmata and then the chains of conidia, which may have been partially broken in making the preparation, can be identified.

Nothing is known concerning the antibody response in humans to infection; consequently, serologic tests remain unevaluated. Positive skin reactions to extracts of *Aspergillus* species, of the immediate whealing type, occur in patients with bronchial asthma, but the significance of reaction of the delayed type and its value in the diagnosis of aspergillosis is unappraised.

Treatment. The official solution of potassium iodide should be given orally in the largest doses that can be tolerated. Prognosis is favorable if the infection is limited to the bronchi, but very poor if there is extensive involvement of the parenchyma of the lung with/or without abscess formation.

MUCORMYCOSIS

The genus of *Mucor*, along with *Rhizopus*, belongs to the family *Mucoraceae*. Molds of this family are frequently referred to as the bread molds and they are found abundantly in soil, manure and on fruits and starchy foodstuffs. Human infections from species of *Mucor* are rare. Of the many species of this genus only a few, notably *M. corymbifer*, are pathogenic.

Diagnosis. In most of the reported cases of human infection due to the *Mucors* only a single organ or system is ordinarily involved. Infection of the lungs is most common, yet there is no clue from the signs or symptoms offered by the infection that might lead one to suspect infection from *Mucor*. As in aspergillosis the findings may suggest pulmonary tuberculosis or other mycotic infections.

The diagnosis of mucormycosis is fraught with difficulties. Even growth of the fungus on culture of the sputum is not unimpeachable evidence of primary infection. The conidia of *Mucor* are airborne and may become laboratory contaminants, and they may reside as saprophytes in the respiratory passages and on the skin. Characteristic fragments of mycelium must be repeatedly demonstrated in sputum or from the region where infection is suspected.

Treatment. A specific form of therapy has never been developed. It is necessary to adapt procedures that have been applied to other mycotic infections.

THE EXOGENOUS PULMONARY MYCOSES

NOCARDIOSIS

The term *nocardiosis* defines infections in man produced by one or several of the species of actinomycetes included in the genus *Nocardia*. The actino-

mycete in this genus which is of interest to the clinician is *Nocardia asteroides*. This organism is common in the soil and it is reasonable to assume that pulmonary infection is initiated by the inhalation of contaminated dust particles. The disease is uncommon but world-wide in distribution.

Diagnosis. In the lung the organism produces bronchopneumonia of a caseating type that may be followed by cavity formation. The clinical picture, therefore, is frequently confused with that of pulmonary tuberculosis. There is a tendency for the organisms to disseminate via the blood stream with the eventual formation of abscesses in many of the organs, particularly the brain. Death is frequently caused by brain abscess. Often the lesions in the lungs are not observed until postmortem examination.

Nocardia asteroides undergoes fragmentation in the sputum and, being acid-fast, the fragments resemble tubercle bacilli. However, the long branched filaments eventually can be found by careful search. The organism grows readily on culture media, but more slowly than bacteria; consequently isolation from sputum by plating is difficult. Pure cultures can be obtained by inoculating guinea pigs with sputum. The animals die after four to nine days and at autopsy miliary white nodules are observed over the omentum and the peritoneal surfaces.

There is no evidence that antibodies are formed as a result of infection. Serologic tests, therefore, are not employed as a diagnostic aid. Asteroidin, which is a broth filtrate of *Nocardia asteroides*, has been employed as a skin testing substance in the experimental infection of guinea pigs and rabbits. Its use as a diagnostic aid in human infections has not been evaluated.

Treatment. The specific measures of treatment are similar to those for actinomycosis produced by *Actinomyces Israeli*. There is one notable exception. Penicillin is not particularly effective in nocardiosis. Sulfadiazine, alone or combined with sulfamerazine, and aureomycin are the drugs of choice.

COCCIDIOIDOMYCOSIS

Coccidioidomycosis is a name originated by Dickson^{8, 9} of Stanford University for the disease produced by the fungus *Coccidioides immitis*. The organism produces an acute, usually mild and benign respiratory infection, which is classified as the primary type of coccidioidomycosis. Infrequently, the infection becomes chronic and disseminates to almost any organ, producing therein granulomatous lesions, which progress to such an extent that death occurs in 50 per cent of such cases. This chronic form of the disease is spoken of as progressive or disseminated coccidioidomycosis.

The fungus is present in the dust and soil of the arid and semi-arid regions of southwestern United

States. The light, minute arthrospores which are readily adapted to widespread dissemination, gain entrance into the human body through the respiratory tract, or more infrequently into the skin following trauma. Rodents and other animals in the endemic areas may act as reservoirs for the fungus.

Diagnosis. The symptoms of primary coccidioidomycosis are indistinguishable from those of many acute, mild respiratory infections. Actually the great majority of primary infections are entirely asymptomatic. When symptoms do occur there may be gradations of expression. The incubation period varies from one to three weeks. There is usually fever, which ranges from 99° to 101° F. Pain in the chest is one of the most typical and suggestive symptoms of the disease. Headache, backache, night sweats, anorexia and sore throat are common symptoms. Quite often a morbilliform rash will appear one to two days after the onset of infection. Eight to 14 days following the onset of illness, allergic reactions such as erythema nodosum, erythema multiforme, arthralgia and phlyctenular conjunctivitis may occur. Usually no abnormality is noted upon examination of the lungs. However, in one out of five patients some change in the quality of the breath sounds may be noted. Roentgenograms of the lungs may or may not reveal the following: Thin-walled cavitation usually present in the middle or lower lobes, but rarely above the clavicle; soft infiltrations; enlarged hilar nodes; and fan-shaped densities radiating out from the hilar nodes. If the lung changes present in the primary form persist for six or more weeks, the progressive form of the disease should be suspected. With the progression of the infection the infiltrations increase in size; there is enlargement of the mediastinal nodes; cavities, formerly present, enlarge; cough is pronounced; and the sputum which was scanty becomes more profuse and is occasionally tinged with blood. Approximately 0.1 to 1.0 per cent of the primary cases develop into the progressive form of the disease.

Laboratory studies are helpful in making a diagnosis. There is frequently leukocytosis accompanied by eosinophilia. The sedimentation rate is elevated and ordinarily there is positive reaction to the coccidioidin skin test. Should a positive reaction to skin test occur in a patient with a normal sedimentation rate it is unlikely that the current illness is due to *Coccidioides immitis*. During the recovery phase of the primary infection the lymphocytes rise to 50 per cent or more of the total white blood cell count and the sedimentation rate gradually declines. The precipitin and complement fixation tests are usually positive, but they may be negative in mild infections. Titers of the precipitin and complement fixation tests are high in the progressive form of the disease.

Coccidioides immitis grows on Sabouraud's agar as a white, cottony mold which pigments with age. Old cultures contain myriad large, thick-walled arthrospores (chlamydospores). When these spores are injected into animals they enlarge and become spherical. These large spherical cells, referred to as "spherules," give rise to endospores by cleavage of their cytoplasm. It is the "spherule" that is found in the sputum of the patient infected with *Coccidioides immitis*. It is usually taught that the "spherules" are not contagious. However, investigations recently reported by Rosenthal^{23, 24} indicated that it is well to be suspicious of the old dogma that coccidioidomycosis is never contagious.

Treatment. There is no specific form of therapy for coccidioidomycosis and it can only be hoped that by exercising careful nonspecific measures progression and dissemination of the infection can be prevented. A patient with primary coccidioidomycosis must be kept at absolute bed rest until: (1) the physical symptoms of the infection have disappeared, (2) there is evidence from roentgen examination of the lungs that the lesion has either disappeared or is regressing, (3) the sedimentation rate has returned to normal, (4) the precipitin and complement fixation tests are disappearing or absent.

Most of the patients with the progressive form of the disease die in two to twelve months, but some may recover spontaneously. If patient is extremely sensitive to coccidioidin, that is has a large skin reaction to a 1:1,000 or 1:10,000 dilution, desensitization with this antigen should be given a trial.

HISTOPLASMOSIS

The disease histoplasmosis was first discovered in the Panama Canal Zone by Darling⁵ in 1906. Darling believed the causative organism was a protozoan and gave it the name *Histoplasma capsulatum*. De Monbreun⁶ eventually established that the etiologic organism in histoplasmosis is a fungus. He suggested that a relatively mild and nonfatal form of the disease, similar in nature to the primary and nonfatal form of coccidioidomycosis might exist.⁷ Palmer²⁰ and Christie and Peterson,³ together, were principally responsible for the discovery and recognition of histoplasmosis of the common benign pulmonary type. There are surprisingly few instances of progressive histoplasmosis in view of the many cases of primary pulmonary infection. It is tempting to speculate that the form of the organism that is inhaled is less virulent than the form that enters the body through the skin, mucous membranes, and gastrointestinal tract. The organism has been isolated from the soil and the disease recognized in diversified regions of the United States. It is now the belief that histoplasmosis can exist in any age group, in widespread localities, and can be diag-

nosed where suspicion is alerted and sound mycologic methods are used.

Diagnosis. There are two types of benign pulmonary infection, asymptomatic and symptomatic.

In the *asymptomatic form* the diagnosis is made in retrospect after observing areas of calcification in the pulmonary roentgenograms of patients with positive reaction to histoplasmin skin tests. Although the patients may have positive reaction to tuberculin skin tests it is now generally agreed that pulmonary calcification occurs twice as frequently in association with histoplasmin sensitivity as with tuberculin sensitivity. The pulmonary lesions preceding the areas of calcification are infiltrative and difficult to differentiate from similar lesions occurring in pulmonary tuberculosis. The diagnosis is established by culturing *Histoplasma capsulatum* from the sputum, which is not always easily accomplished. In the event that tubercle bacilli cannot be cultured or demonstrated by direct microscopic technique, histoplasmosis may be suspected. This is especially true if the reaction to a histoplasmin skin test is strongly positive and the tuberculin test is negative or only mildly positive.

In the *symptomatic form* of histoplasmosis the clinical course of the disease and the roentgenologic findings offer a relatively uniform picture. The incubation period is from five to 18 days. The onset of symptoms is rather sudden, with generalized malaise, weakness, vague pain in the chest, nonproductive cough and fever (temperature 102° to 105° F.). There are a few positive physical findings. During the early course of the disease pulmonary roentgenograms reveal the lung fields to be clear, but later disseminated and bilateral lesions varying from fine or mottled granular infiltrations to soft miliary nodules are observed. Cavitation rarely occurs. The lesions tend to calcify in from three to five years after the onset of the acute illness. Even after the acute phase of the illness has disappeared the symptoms of shortness of breath, cough and fatigue often persist for months or even years.

There is some evidence that the symptomatic form may occur in epidemic proportions. Fairly large groups of persons have developed pneumonitis following exposure to the dust of pigeon manure and subsequently *Histoplasma capsulatum* has been isolated from the dust.^{12, 13} Such epidemics simply serve to exemplify that histoplasmosis may occur in epidemic proportions if exposure to dust from soil contaminated with the organism takes place.

The fungus in its parasitic phase is a small yeast-like organism ranging in diameter from 2 to 3 microns. These yeast-like bodies invade the mononuclear cells in enormous numbers. In the sputum the yeast-like bodies are extracellular. Cultures taken from the sputum must be placed on both blood agar

and Sabouraud's media. On Sabouraud's agar at 30° C. the organism produces a white, cottony growth. Spores ranging in size from 10 to 25 microns are produced and from these spores rise finger-like projections 5 microns in length. The growth on blood agar at 37° C. is yeast-like. The gross cultural characteristics of *Histoplasma capsulatum* and *Blastomyces dermatitidis* are similar.

Histoplasmin is a cultural filtrate and contains extracellular antigenic fractions of *Histoplasma capsulatum* produced by growing the organism in a synthetic liquid medium. Skin tests are usually conducted with 1:1,000 and 1:100 dilutions of this broth filtrate. A negative skin reaction to 0.1 ml. of the 1:100 dilution rules out the presence, in the past or at the time of testing, of histoplasmosis. Diagnostic and prognostic attributes of the precipitin and complement fixation tests in human histoplasmosis have not as yet been authenticated.

Treatment. In the pulmonary form of the disease the prognosis is ordinarily good with only non-specific supportive measures of treatment. Only one drug, ethyl vanillate, of the many different therapeutic agents tested, has proven to be effective in the management of the disseminated form of the disease. The original article by Christie⁴ and co-workers should be carefully read before treatment with this drug is given to a patient.

NORTH AMERICAN BLASTOMYCOSIS

North American blastomycosis is a relatively common fungous disease characterized by the formation of granulomatous lesions in the skin, lungs and bones. It is caused by the fungus *Blastomyces dermatitidis*.

Blastomyces dermatitidis is derived from soil and infections develop, for the most part, in persons whose occupations take them into the fields and the forests where contact with the natural source of the saprophytic form of the fungus occurs. Although the greatest incidence of the cases is in the southeastern states and in the Mississippi River Valley area, isolated cases have been reported from nearly every section of the United States as well as from regions in eastern and western Canada.

Diagnosis. The pulmonary form of the disease is often followed by dissemination. The symptoms of pulmonary blastomycosis are insidious and are usually those of an ordinary subacute respiratory infection. There is usually a nonproductive cough, discomfort in the chest, low grade fever and slight dyspnea. With progress of the infection the shortness of breath becomes more annoying, the temperature climbs, and there is loss of weight and strength. Roentgenograms of the lungs frequently disclose enlargement of the mediastinal lymph nodes. Dense masses are frequently observed near the hilum and

project into the lung fields with irregular outlines. The finding of such a hilar mass may quite naturally provoke a diagnosis of bronchogenic carcinoma. As the infection progresses the mediastinum becomes invaded and there is eventually involvement of the pericardium and the heart. The infection may disseminate from the lungs by way of the blood.

The diagnosis is established by demonstrating the organism in the sputum, wherein the fungus occurs only as a round or oval yeast-like cell which reproduces by budding. The cells are easier to demonstrate if the sputum is first treated with 20 per cent sodium hydroxide. The finding of doubly contoured budding cells with granular contents, which in size are slightly smaller than leukocytes, makes the diagnosis certain. Cultures should be made on both Sabouraud's and blood agar media. On Sabouraud's media at 30° C. the colonies first appear smooth and grayish, but they soon become wrinkled, and eventually a white cottony type of growth develops. Cultures on blood agar incubated at 37° C. do not develop filamentous growth but remain yeast-like in appearance.

A blastomyces vaccine or a broth filtrate (blastomycin) prepared in synthetic media from the growing fungus is used for skin testing. Cross reactions between blastomyces vaccine or blastomycin and histoplasmin and coccidioidin are common. This is undoubtedly due to an antigenic fraction common to *Blastomyces dermatitidis*, *Histoplasma capsulatum* and *Coccidioides immitis*. Therefore, regardless of which mycotic infection is suspected, skin tests with blastomyces vaccine or blastomycin, histoplasmin and coccidioidin should always be made. Only those patients very sensitive to coccidioidin (positive reaction to 1:10,000 dilution) give cross reactions with blastomyces vaccine or blastomycin and histoplasmin. Cross reactions between blastomyces vaccine or blastomycin and histoplasmin are very common. However, patients with blastomycosis give larger reactions to blastomyces vaccine or blastomycin than to histoplasmin, and the reverse is true of patients with histoplasmosis.

The complement fixation test is positive during an active infection and the titer rises as the infection progresses. The titer of the test also declines as the patient improves, and disappears with recovery.

Treatment. Pulmonary and systemic blastomycosis are not often favorably improved by x-ray therapy. Patients who are in good general condition with sera containing antibodies that fix complement, usually respond to iodide therapy. Iodides should be given to the point of maximal tolerance and maintained at the largest daily dose that can be administered without symptoms of iodism. Because improvement is very gradual, iodide therapy must be continued over a period of one to three years. Pa-

tients with positive reaction to skin tests with blastomyces vaccine or blastomycin, with or without positive complement fixation tests, usually do not respond to iodide therapy and the disease causes death quickly. However, if these patients are desensitized with blastomyces vaccine and then treated with iodides they ordinarily improve as rapidly as the patients who are not allergic. Patients without positive complement fixation tests and with negative skin tests should receive treatment with blastomyces vaccine until there is a positive complement fixation test. Thereafter, iodide therapy should be given.

Certain diamidines exert an in vitro fungistatic effect on *Blastomyces dermatitidis*,²⁵ and several patients with blastomycosis have been treated with some success with stilbamidine.^{21, 26} This drug, 0.05 gm. to 100 ml. of 5 per cent glucose solution, is given by slow intravenous drip the first day. If this dose is well tolerated, then 0.1 or 0.15 gm. is administered in a similar fashion every day for 10 to 14 days. This course may be repeated if advisable after a two-week period during which the drug is not given. The amount of stilbamidine necessary for cure is not known, but probably a total dosage of 3 to 6 gm. given in two or three courses is enough.

In a high percentage of patients a neuropathic condition involving the trigeminal nerve appears two to five months after treatment with stilbamidine. The sensation to touch is lost but sensations to pain, temperature and pressure remain intact. The sensory changes may persist indefinitely.

Although stilbamidine is the first drug of choice in the treatment today of all cases of pulmonary blastomycosis, regardless of the immunologic and allergic status of the patient, physicians must be ever mindful that its use represents a new form of treatment and, therefore, its dangers and limitations have not at this time been entirely evaluated.

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The Treatment of Cryptorchidism

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IT IS BECOMING more and more apparent that the present treatment of cryptorchidism is not affording uniformly satisfactory results. Indicative is the wide divergence of opinion on the most satisfactory method of therapy.

THE AIMS OF THERAPY

The primary goal of therapy is preservation of function of the testis, for normal spermatogenesis is very rare in the retained organ^{7, 12} which is thereby deprived of the cooling mechanism of the scrotum.⁸ Fortunately the Leydig cells, which elaborate androgenic hormone, are more resistant to body temperature, so that this all-important function is almost always well maintained.^{3, 9, 10}

At least 85 per cent of persons with undescended testes have inguinal hernias as well. Surgical intervention is therefore clearly indicated.

Normal placement of the testicle decreases the threat of trauma to the organ; it may also diminish the incidence of torsion of the spermatic cord. Although the retained testis is prone to malignant change, clinical observation suggests that orchidopexy does not prevent its development at a later date.

CONFUSION ABOUT MODERN THERAPY

Every phase of treatment is being debated. There is little agreement as to either the optimum age when treatment should be instituted or the methods of administration.

A minority of investigators advise treatment as early as the age of two or three years. Others believe that the optimum age is between six and eight years. Still others, recognizing that in a number of cases retained testicles descend spontaneously at puberty, await this period before definitive steps are taken.

A few will not use gonadotropins for fear of causing atrophy of the testis or undesirable sexual development. Some believe that 4,000 international units of chorionic gonadotropin is an adequate amount; others give five to ten times that quantity.¹

Most authorities advise some kind of fixation of the organ at the time of surgical treatment. Others are emphatically opposed to such a procedure.

• Medical opinion is quite confused about the age for and the method of treatment of the undescended organ. Histologic studies reveal that the spermatogenic cells of the undescended testis show definite injury by the age of four or five years. It therefore seems necessary to see that the testis is in the bottom of the scrotum before that age. Chorionic gonadotropins or testosterone should be tried first. If medical treatment fails, orchidopexy should be done without delay.

RESULTS OF PRESENT-DAY TREATMENT

Surgeons are likely to judge the success of operative treatment by the anatomical findings some years later. The size and consistency of the testis and the position of it in the scrotum are their criteria. Surgical reports based on these standards show that in at least 40 per cent of cases in which operation is done the testis undergoes some atrophy or becomes retracted from the scrotum.¹ Most of the testes in which such changes occur will prove to be infertile.

Recent physiologic investigations on the retained testis, both treated and untreated, have emphasized the inadequacy of modern therapy. Hansen⁶ studied nine men with untreated bilateral maldescent. In none of these cases did the semen contain sperm. Of 25 men who had had operation to free the testes from the abdomen, 14 had no sperm and four had severe impairment of fertility. Only two had normal semen.

The sperm counts in 36 treated and 35 untreated persons with unilateral cryptorchidism were essentially the same. They average about 70 million per cubic centimeter. The sperm count of normal males is about 135 million per cubic centimeter. In other words, orchidopexy contributes little or nothing to the preservation of spermatogenic activity of the abnormally placed organ.

Engberg⁴ observed that men with bilateral cryptorchidism, treated or not, excrete only one-half the normal amount of androgen. Further, the majority had increased amounts of urinary gonadotropins, which indirectly indicated decreased androgenic activity. In other words, orchidopexy does not preserve the hormonal activity of the testis.

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These findings also demonstrated that compensatory hyperplasia of spermatogenic and Leydig cells does not occur if the other testis is inadequate. This is consistent with the report of Zide,¹⁴ who noted that a testis deprived of its mate did not increase in size.

THE CAUSE OF POOR RESULTS

It may be instructive to consider the causes for the failure of orchidopexy to preserve testicular function.

1. *Age of treatment.* While most authorities think that testicular damage does not begin to develop until the age of puberty, Cooper³ reported contrary findings. She observed the early stage of damage in the retained testis of a 14-month-old boy; a coarser than normal fibrous tissue between the tubules was present. At the age of two and a half years, central fibrosis was more noticeable, fewer spermatogonia were present and there was a reduction in size and number of seminiferous tubules. These changes were even more pronounced at six years. It is significant that in undescended testes of normal size in boys 12 years old, considerable change was observed microscopically. Size, then, is not a reliable criterion of function. Incidentally, no alteration was observed in the appearance or number of interstitial cells in the undescended testis at puberty.

If Cooper is right, and no one has conclusively refuted her claims, treatment has been applied too late.

2. *Surgical injury to the blood supply.* The deterrent to easy placement of the undescended testis at the bottom of the scrotum is that the vascular pedicle which comes from the abdominal aorta is short. Formerly it was believed that if only the artery to the vas was preserved, the testis would flourish. This is not true; the spermatic artery also must be saved. If it is sacrificed, atrophy of the testis occurs. It may, however, be inadvertently torn. If sufficient lengthening of the cord cannot be accomplished, this deficiency is often circumvented by fixation (or tension suture). This procedure, however, may attenuate the vessels, causing ischemia or even thrombosis, with atrophy resulting. Care must also be taken lest the vas deferens be injured.

The work of Hansen⁶ demonstrated that many persons with bilateral cryptorchidism, if subjected to surgical treatment, have some degree of spermatogenic activity. Those untreated do not. Greater care in surgical technique may therefore increase the degree of fertility in this group.

3. *Intrinsic testicular factors.* It may be that in some cases failure of treatment is preordained. Intrinsically, the testis may be abnormal from the beginning. Is this why it failed to descend under

hormonal stimulation from the mother, although its mate did? The high incidence of malignant disease in ectopic testes further corroborates this suggestion. Even if this be true, however, surgical treatment must still be undertaken in order to cure the hernia and to satisfy the demands of parents who prefer that their sons have two testes in the scrotum.

A RATIONAL PLAN FOR THE TREATMENT OF CRYPTORCHIDISM

1. On the basis of Cooper's work, the optimum age for institution of therapy would seem to be two years. Although the structures are delicate, careful technique can preserve them. Testicular adhesions are less dense at this age. Engberg⁴ gave as much as 1,000 international units of chorionic gonadotropin per injection to newborns without observing adverse effects. Hormonal therapy is therefore not contraindicated in the very young.

2. Hormonal therapy is indicated in all cases. The more careful the clinical differentiation between true cryptorchidism and physiological ectopy,⁵ the poorer are the results of hormonotherapy in the former group. Favorable response may occur in possibly not more than 10 per cent of cases. Patients who do react favorably, however, will be spared an operation which in itself entails some risk to the blood supply of the organ. The testis may retract after cessation of treatment, but it will descend again spontaneously at puberty. In fact, it seems quite evident that if descent occurs during administration of gonadotropin, it would have done so at the time of puberty. Patients who do not have response to hormonal therapy are candidates for prompt surgical correction. Even if a hernia is present, hormones should be used, for if descent occurs hernioplasty alone is required and treatment is thereby simplified.

The dose of chorionic gonadotropin for a boy two or three years of age is 250 international units. At six years, 500 international units is adequate. Injections should be given three times a week for not more than six weeks. If undesirable side reactions are observed, the dose should be reduced.

3. If the gonadotropins do not bring about descent, orchidopexy is necessary. The testicle and its vascular cord and the vas must be completely separated from the hernial sac, from adhesions and from the cremaster muscle. Careful retroperitoneal dissection of the spermatic vessels is of prime importance so that the vascular pedicle is elongated. The vas seldom contributes to the shortness of the cord. The peritoneal sac is then resected and the neck of the sac sutured. Further length, particularly of the vas, can be obtained by sacrificing the inferior epigastric vessels just medial to the internal ring; the transversalis fascia (the floor of the inguinal canal) is opened. By this maneuver the dis-

tance the cord must span is shortened, for it emerges at the external ring.

In true cryptorchidism the scrotum is undeveloped, and enlargement must be done by finger dissection from above. If the cord is long enough so that the testis rests easily at the bottom of the scrotum, a chromic suture should be taken in the lower pole of the testis and the ends passed through the lower scrotal wall. Mild traction with rubber bands for seven to 14 days will hold the organ in place. Usually, however, the cord cannot be made long enough for that method, and in that event fixation of the testicle to the thigh by the method of Keetley-Torek¹¹ or of Wangenstein¹³ will be necessary; otherwise retraction from the scrotum will occur in a significant number of cases. The testis can be released two months later.

If the vascular pedicle is extremely short, fixation to the thigh is contraindicated lest attenuation of the vessels so reduce the supply of blood that atrophy occurs. The operation described by Cabot and Nesbit² should be used in such cases. At the first stage, the hernial sac is excised but the serosa about the testis is closed over as the parietal layer of the tunica vaginalis. The testis is buried as close as possible to the site it ultimately will occupy. More hormonal therapy at this stage may further elongate the cord so that, after a few months, the testis can be advanced, surgically, to the bottom of the scrotum. It is then fixed to the thigh. Later it can be released.

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Hypercalcuria and Metabolic Bone Disease

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THE ASSOCIATION of hypercalcuria, renal calcium deposition and bone disease serves to bind together a number of otherwise unrelated diseases. The development of nephrolithiasis and nephrocalcinosis in these syndromes is largely secondary to disturbances in the gain and loss of calcium and phosphorus. Because of the associated errors in calcium and phosphorus metabolism, bone disease commonly accompanies the renal lesions either as a cause of increased loss to the blood and urine or as a secondary effect of decreased stores of available calcium.

This group of diseases frequently comes to the attention of urologists because urolithiasis may be the predominant or only symptom while the true etiologic defect, an aberration in the calcium metabolism, remains obscure. Although the statistical incidence of urolithiasis secondary to metabolic disease comprises only a small percentage of the total number of cases in which there are renal stones, it is nevertheless important to recognize the basic disorder not only to prevent recurrence or progression of calculous disease but to correct the underlying lesion. Regardless of the cause, the end results of hypercalcuria are the same so that the urologic manifestations remain relatively constant. The diagnosis in these conditions may be suspected by determining the presence of hypercalcuria. This is done by measuring the 24-hour urinary calcium excretion while the patient is on a regulated low calcium intake.

The renal disease can consist of either nephrolithiasis or nephrocalcinosis. Nephrolithiasis is of course the formation of calculi in the calyces or pelvis of the kidney (Figure 1). Nephrocalcinosis is calcification in the renal parenchyma and is a more serious sequel since calcium deposits fill the collecting tubules of the kidney and renal insufficiency occurs more rapidly (Figure 2). Calcium phosphate casts in the urine are not indicative of this disease since they occur normally in alkaline urine of patients who ingest large quantities of calcium and phosphorus. These casts disappear when the urine becomes acid.¹ Patients may have either nephrocalcinosis or nephrolithiasis but most often do not have both.²

• *Hypercalcuria leading to nephrocalcinosis and nephrolithiasis may be secondary to a number of causes. In most instances, the history, physical examination, a few simple laboratory tests and x-ray study of the bones will reveal the true primary diagnosis. Specific treatment, if instituted early, will result in a satisfactory response and prevent the progression of renal complications.*

BASIC CONSIDERATIONS

The skeleton contains 99 per cent (900 to 1,500 grams) of all the calcium in the body, and normal daily deterioration of the bones leads to the urinary

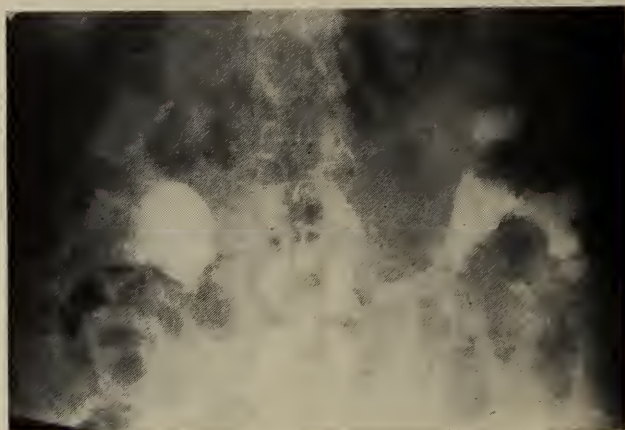


Figure 1.—Nephrolithiasis. Bilateral staghorn calculi filling the renal pelvis and calyces.

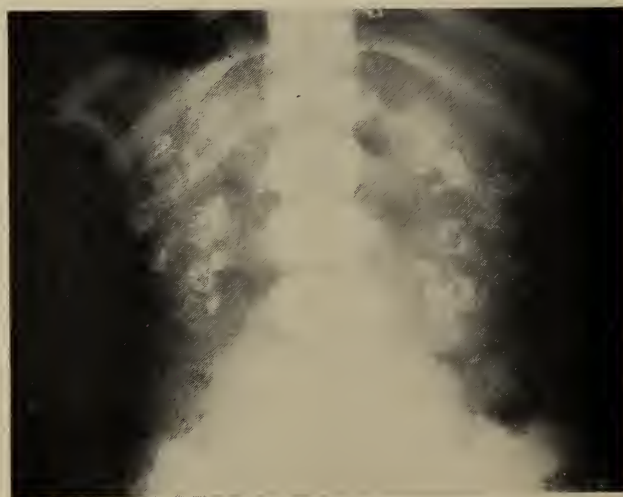


Figure 2.—Nephrocalcinosis. Diffuse parenchymal calcification in the tubules of a 7-year-old girl.

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and fecal excretion of about 300 mg. or more of calcium when there is an average dietary intake of a half gram or more. Of the total bone ash, 85 per cent is calcium phosphate and 12 per cent is calcium carbonate. The normal serum calcium values are 9 to 11 mg. per 100 cc. and the "renal threshold"—the serum content below which calcium is not excreted in the urine—is 7 mg. per 100 cc. About one-fourth to one-third of the calcium intake is normally excreted in the urine. One-half the total serum calcium is ionized, soluble and diffusible. This fraction is subject to parathyroid control. Most of the remaining calcium is bound to protein. No calcium is found in the erythrocytes.

When there is only a slight increase in the total serum calcium it is important to measure the total serum protein. The amount of ionized calcium reflects the degree of hyperparathyroidism while the amount of calcium bound to protein is determined by the amount of protein. Thus the ionized calcium may be slightly high with mild hyperparathyroid disease. Yet if the total protein is low, the total serum calcium will be normal. The amount of ionized calcium can be determined by the use of a chart calculated by McLean and Hastings¹³ if the amounts of serum calcium and serum protein are known (Chart 1).

Of the average 670 grams of phosphorus present in the body, 80 per cent is in the skeleton.¹⁶ Approximately two-thirds of the phosphorus intake normally goes out in the urine, this being almost the entire phosphorus excretion from the body. The inorganic phosphorus, which is the ionized form and is under parathyroid influence, represents one-fourth the total serum phosphorus and is normally 3 to 4.5 mg. per 100 cc. of serum.

There is a definite equilibrium which the body maintains in terms of calcium and phosphorus so that an increase in the ions of one will result in a decrease in the other. This equilibrium is such that the product of the milligrams per cent of total serum calcium to serum inorganic phosphorus is between 30 and 40 for adults and slightly higher for children. Calcium and phosphorus also influence each other in terms of absorption from the gastrointestinal tract. With a high calcium intake less phosphorus is absorbed since insoluble calcium phosphate is formed. When there is a low calcium diet, phosphorus absorption will be high.

An important consideration is that bone is a living tissue rather than merely a structural support composed of inorganic materials. It is a protein mass containing calcium-phosphate-carbonate salts. There is a constant formation of new bone with production of protein matrix and deposition of calcium salts. The matrix or osteoid is produced by the osteoblastic cells which also produce alkaline phosphatase (an enzyme which releases phosphate from

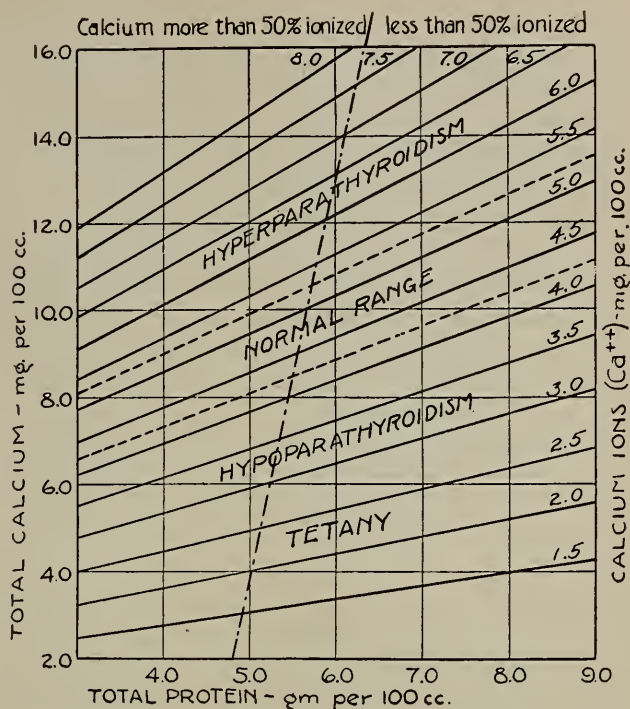


Chart 1.—Calculation of ionized calcium from total serum calcium and protein. (From McLean and Hastings.)

organic complexes). Simultaneously, continuous bone resorption is occurring due to wear and tear and the osteoclastic cells are active in destroying bone. Acidosis increases solubility and increases bone resorption. Since phosphorus is excreted with the calcium, most of the calculi formed are of the calcium phosphate variety. These have a tendency toward staghorn formation.

CAUSES OF HYPERCALCAURIA

There are essentially four causes of hypercalcauria as described by Reifstein:¹⁶ (1) Excess gastrointestinal absorption of calcium; (2) excess bone resorption; (3) decreased bone formation; (4) excess renal excretion of calcium.

Excess gastrointestinal absorption. Calcium is absorbed in the proximal portion of the small intestine possibly because this portion has a more acid medium and calcium solubility increases with acidity. Increased absorption occurs with excessive dietary intake (as in ingestion of large amounts of milk) and with vitamin D poisoning from excessive medication over prolonged periods. Vitamin D acts to increase calcium absorption from the gastrointestinal tract and to increase urinary phosphorus excretion. By contrast, decreased calcium absorption from the bowel may be effected by (a) fatty diarrhea with the formation of calcium and magnesium soaps and the loss of vitamin D, which is fat-soluble; (b) increased phosphates in the bowel, forming insoluble calcium phosphate. Increased fecal phos-

phate occurs in uremia where the diseased kidney cannot excrete phosphate, thus giving rise to hyperphosphatemia and increased intestinal excretion.¹⁹ It also occurs in association with diets rich in phosphate with little calcium. With increased calcium absorption, the excess intake is compensated by excess urinary excretion of calcium.

Excess bone resorption. Excess calcium loss by resorption of bone occurs with hyperparathyroidism, acidosis, osteolytic metastases, multiple myeloma, Paget's disease and sarcoidosis. The calcium released from the bone enters the circulation and is excreted through the urine.

Primary hyperparathyroid disease causes a classical syndrome. Increased production of parathyroid hormone causes hypophosphatemia which leads to hypercalcemia. Albright and co-workers² found that excess hormone causes (a) increased excretion of phosphate in the urine by decreasing the renal threshold for phosphate excretion and (b) increased activity and hyperplasia of the osteoclasts, thus causing increased bone loss of calcium and phosphorus. These changes then give rise to the following sequence of events:² (1) hyperphosphaturia; (2) hypophosphatemia; (3) hypercalcemia; (4) hypercalcuria.

With the excess excretion of calcium and phosphorus, nephrolithiasis (or calcinosis) occurs, and then renal insufficiency. Polyuria and polydipsia occur due to the action of parathyroid hormone as well as from tubular damage which occurs from calcium precipitation.

Since the excess calcium comes from both the bones and the food, bone changes may not be demonstrated if the dietary ingestion of calcium has been adequate. In many instances, the renal lesions are the only objective findings. In more advanced cases, the blood changes of increased calcium and decreased phosphate are evident, but in early or mild cases, only the urine will reveal the diagnosis.

In all cases of recurrent or multiple calculi, particularly of the calcium phosphate variety, the 24-hour urinary calcium excretion should be measured. This is done on the fourth day of a diet that contains less than 175 mg. of calcium daily. If the 24-hour calcium excretion is more than 200 mg., hyperparathyroidism should be strongly considered. The Clark-Collip⁸ method for calcium determination gives an accurate quantitative measurement. The Sulkowitch test is helpful but gives only a rough qualitative estimate of calcium excretion.³

The serum alkaline phosphatase will be elevated only if there is associated bone disease (osteitis fibrosa generalisata). Hence, this test is not diagnostic of hyperparathyroid disease and it indicates only the degree of bone involvement. In early bone lesions, only the skull and the lamina dura around

the teeth may be affected. However, where there is extensive bone disease, as roentgenographically observed, if the alkaline phosphatase is not elevated, hyperparathyroid disease may be ruled out. In patients who drink milk or increase the ingestion of calcium, the bone lesions may regress but the underlying disease remains the same.

Thus the major diagnostic points are excess urinary calcium excretion, elevated serum calcium and decreased serum inorganic phosphorus. Resorptive bone lesions are associated with elevated serum alkaline phosphatase. Treatment consists of surgical removal of the parathyroid adenomata. The immediate postoperative period may be dangerous in patients with high serum alkaline phosphatase. Tetany may occur since the calcium leaves the blood for deposition in the bones as calcium phosphate. These patients should have a high calcium intake, usually best given intravenously as calcium gluconate. Phosphate should be withheld, since lack of it prevents deposition of calcium as calcium phosphate.

Chronic acidosis is generally associated with increased bone resorption. This may be at least in part due to the increased solubility of calcium and phosphate in an acid medium so that a more rapid rate of dissolution occurs. When the acidosis is associated with renal disease, secondary hyperparathyroidism often occurs. According to Albright and Reifstein,² the sequence of events is (a) renal insufficiency, (b) phosphorus retention, (c) tendency to low serum calcium as an adjustment to an elevated serum phosphorus and (d) parathyroid hyperplasia to meet this tendency. This condition is called "renal rickets" (improperly) because the epiphyseal changes which occur in this syndrome are somewhat like those of rickets. There is widespread renal damage in such cases and the calcium and phosphorus aberrations are due to both tubular and glomerular disease.² First the tubular disease prevents the tubular production of ammonium ion and hydrogen ion. Then acid urine cannot be excreted because no ammonium or hydrogen ion is produced to ferry the acid radicals. To substitute for these acid-neutralizing ions, calcium is excreted in the urine. This lowers the serum calcium and also leads to parathyroid hyperplasia. Ordinarily, parathormone would cause excess urinary excretion of phosphate but this does not occur because of the defective glomeruli. Hence the high serum phosphorus remains. This high serum phosphorus is conducive to the prompt laying down of calcium in the bone, particularly in the trabeculae. Thus, in these circumstances the acidosis causes the bone disease, whereas in primary hyperparathyroidism the excess hormone causes the bone disease. The acidosis and renal disease should be treated and the bone will respond. The administration of alkaline salts such

as sodium citrate will correct the acidosis. The addition of citric acid is helpful since the intestinal contents become more acid and calcium absorption is increased.² The citric acid is metabolized after absorption and leaves free base. Large amounts of vitamin D and calcium in addition will relieve the bone disease. The renal failure should also be treated.

In chronic acidosis and secondary hyperparathyroidism there is thus primary renal disease with elevated creatinine, urea, sulfate, phosphorus and a decreased phenolsulphophthalein excretion. There is both a loss of base and a retention of acid ions. In primary hyperparathyroidism serum phosphorus is low and serum calcium high. In secondary parathyroid disease, the serum phosphorus is high and the serum calcium is low or normal and there is always associated bone disease with elevated alkaline phosphatase (osteomalacia or osteitis fibrosa generalisata).

Secondary parathyroid hyperplasia occurs not only in kidney disease with a high phosphate but in all types of osteomalacia or rickets, pregnancy and states of calcium deprivation.² In all of these there is a tendency toward low serum calcium, which stimulates the parathyroids.

Metastatic malignant disease of the osteolytic type will occasionally cause hypercalcemia, hypercalcuria and nephrolithiasis. In these cases it is likely that the malignant process dissolves the calcium and allows it to pour into the blood more quickly than the kidneys can excrete it. The serum phosphate is most often normal or occasionally high in these cases and it is only rarely low. Diagnosis can be made by the typical roentgen appearance of the lesions and the presence of malignant change. In general, treatment of the underlying metastasis will result in improvement of the urologic complications. Hermann and co-workers,⁹ however, observed some instances in which androgens and estrogens given for osteolytic metastatic breast carcinoma caused hypercalcemia and subsequent azotemia. This was in bedridden patients. Hypercalcemia induced by sex hormones has not been observed in ambulatory patients. Apparently, the steroids mobilized calcium, which was excreted through the kidneys, giving rise to nephrocalcinosis and renal insufficiency. This action is similar to that occurring in parathyroid hormone and ergosterol therapy.

In multiple myeloma also there may be a high content of calcium in the serum and the urine, but in most instances the phosphate and the alkaline phosphatase is normal. The changes appear to be a direct effect of the lesions acting on the bone. Diagnosis may be made by the roentgen appearance of the bones, the presence of plasma cells in the blood, excess blood globulin and examination of

material aspirated from sternal puncture. Bence-Jones protein may be present in the urine.

Paget's disease (osteitis deformans) seldom causes hypercalcuria and stones, but it may if there is rapid progress of the bone lesions and particularly if the patient is immobilized. This is a "spotty" disease in which areas of bone destruction occur.¹⁶ These weakened areas undergo increased stress and, because of this, osteoblastic activity increases. There then occurs very active bone repair with actual overgrowth of bone and an increase in the density and coarseness of the trabeculations. Because of this pronounced osteoblastic activity, the alkaline phosphatase is greatly elevated. Diagnosis can be made by roentgen observations and the very high phosphatase. In most cases the serum phosphorus and calcium are normal. Treatment of patients with this disease who must be immobilized consists of the Shorr regimen with low calcium and low vitamin D intake. Early ambulation and good fluid intake are stressed. For ordinary Paget's disease without hypercalcemia and renal lesions, the excess bone resorption is treated by a high intake of calcium, phosphorus and vitamin D.

In sarcoidosis (Boeck's), nephrolithiasis and nephrocalcinosis are again secondary to hypercalcemia and hypercalcuria.¹⁰ Granulomatous infiltration of the kidney does not appear to be the major factor in producing renal insufficiency. This condition may be mistaken for hyperparathyroidism clinically but the serum phosphorus is normal and the alkaline phosphatase may be normal or slightly elevated. Blood protein and globulin are usually high, and the bone lesions are mostly limited to the hands and feet and have a punched-out appearance. Management consists of reducing the calcium intake, making sure that fluid intake is adequate, and administration of corticotropin (ACTH) and cortisone. The cause of hypercalcemia in this condition is not clear. On the basis of balance studies showing that increased calcium intake caused decreased loss of calcium from bones, Albright and Reifenstein² expressed belief that it is due to some primary change in the blood that brings about an increase in its calcium content, rather than to the bone disease.

Decreased bone formation. This occurs when the bones are unable to avail themselves of calcium for the purpose of forming new bone and either osteoporosis or osteomalacia is produced. Osteoporosis represents a lesion of tissue metabolism in that the bone is unable to accept calcium even though it is readily available. Osteomalacia on the other hand is a defect involving calcium so that the calcium is not available to the bones. Differentiation of these conditions by roentgen appearance is not difficult when there is either pure osteoporosis or pure osteomalacia. In osteoporosis, there is a diffuse calcium loss



Figure 3.—*Left*: Pronounced osteoporosis in a patient receiving cortisone therapy. There is a diffuse calcium loss with only a thin surrounding calcified shell. *Right*: Pronounced osteomalacia in a patient with hyperparathyroidism. There is a prominent trabecular pattern with coarse and widespread trabeculation.



Figure 4.—*Upper*: Osteoporosis with diffuse calcium loss in the pelvis of the patient in Figure 3 (left). *Lower*: Osteomalacia with prominent primary trabeculation in the pelvis of the patient in Figure 3 (right).

so that only a thin surrounding shell remains. In osteomalacia, the trabecular pattern is prominent with coarse and widespread trabeculation. The laying-down of calcium in the trabeculae in osteomalacia may be explained teliologically in that the osteoblasts are active and deposit inadequate amounts of calcium in the primary supporting structure of the bone. Figures 3 and 4 show the washed-out appearance of osteoporosis and the prominent trabeculae of osteomalacia.

Osteoporosis occurs when the daily wear and tear of the skeleton exceeds the amount of new bone being formed. The causes of osteoporosis are outlined by Albright and Reifenstein² as follows:

I. Defect in osteoblasts.

- (a) Immobilization.
- (b) Postmenopausal—estrogen lack.
- (c) Congenital osteoblastic defect (osteogenesis imperfecta).

II. Defect in matrix.

- (a) Protein loss — malnutrition, scurvy, Cushing's syndrome and "alarm reaction."
- (b) Androgen loss—senility(?) eunuchoid states.

III. Defect unknown.

- (a) Idiopathic.
- (b) Acromegaly.

It is caused primarily by either a defect in the osteoblasts or a defect in the bone matrix so that these structures do not accept calcium even though it be present in the blood stream in large quantities. The calcium or phosphorus is not used by the bones but intestinal absorption continues. Thus, the large amounts of available calcium and phosphorus are excreted in the urine and there can occur hypercalcuria, hyperphosphaturia and sometimes alterations in the serum calcium and phosphorus. In most instances of osteoporosis, however, the serum calcium and phosphorus are normal.

Urologically, osteoporosis becomes disastrous in its acute form, as in association with enforced recumbency, immobilization of the body in a cast, or severe poliomyelitis. In these situations, with absence of the stresses that stimulate osteoblastic activity, bone matrix is not produced. Bone deterioration also occurs more rapidly with immobilization, particularly in young people, and it is not uncommon to observe bilateral staghorn calculi a few months after immobilization. Deitrick and co-workers⁶ studied the effects of recumbency upon healthy men and found that the calcium content of the urine doubled. There was increased urinary phosphorus excretion without increase in the urinary volume. The fecal calcium excretion also increased.

Diagnosis of this condition is not difficult. Generally most changes observable roentgenographically occur in bones other than the skull. The patients usually can eat and move the head so that atrophy of disuse does not affect the skull and lamina dura. The serum calcium and phosphorus are usually normal; but, even in acute cases, when the calcium is elevated the phosphorus is high, not low, and the serum alkaline phosphatase is normal. In hyperparathyroidism, the serum phosphorus is low, the alkaline phosphatase is high and the earliest changes that can be seen roentgenographically occur in the skull and lamina dura.

Management should consist of early ambulation, particularly weight-bearing. The use of the oscillating bed when begun early is of value and has been shown to significantly decrease the abnormalities in calcium, phosphorus and nitrogen balances.²⁰ Weight-bearing may be accomplished even with the patient in casts by the use of a tilt-table which can be adjusted by degrees for gradual standing. Following surgical procedures, there should be maximum motion of all muscles even on the day of operation, and confining dressings such as abdominal binders should be avoided. Shorr's regimen for patients in prolonged recumbency has proven to be most valuable in preventing urinary calculi.¹⁸ The regimen stresses the dietary restriction of phosphorus to less than 1,275 mg. per day. In addition to this, aluminum carbonate (Basalgel) or hydroxide is given in amounts adequate to maintain urinary phosphate excretion of less than 300 mg. daily. The average dose of Basalgel is about 30 to 40 cc. after each meal and at bedtime. This regimen is valuable in preventing the progression or recurrence of phosphatic calculi. Some investigators stress the value of androgens and estrogen to promote calcium and protein storage.²¹ Butt and co-workers⁵ demonstrated that hyaluronidase increases the protective colloids in the urine by releasing hyaluronate at the site of injection. This is excreted in the urine and reduces the tendency toward stone formation.⁵ This observation has not been confirmed in our own clinic.

The more insidious forms of osteoporosis are less often associated with disturbances in the calcium balance, and urologic complications are few. Postmenopausal osteoporosis, probably the most common, is due largely to the loss of estrogen. Estrogens have been shown to have a stimulating effect upon the osteoblasts.² Therapeutically, response to estrogen is good but even better to combined estrogen-androgen therapy. Androgen speeds protein synthesis and leads to a positive nitrogen balance. In patients with disturbances in calcium metabolism, the urinary and fecal calcium and phosphorus excretions decrease with steroid treatment. Pain in the ribs and back disappears rapidly. In this condition,

skeletal demineralization is limited mostly to the spine, ribs and pelvis; and typical "codfish" deformities due to pressure collapse of the vertebral body, with the nucleus pulposus pushing out into the soft bone, are to be seen roentgenographically. The skull and lamina dura are intact and the alkaline phosphatase, calcium and phosphorus are usually normal. In the early stages of postmenopausal osteoporosis, there may be an acute phase with hypercalcemia, hypercalcuria and renal stones.

Osteogenesis imperfecta does not concern urologists except in differential diagnosis. The congenitally defective osteoblasts form too little bone matrix. The patients have characteristic blue sclerae and nerve deafness. The serum calcium and phosphorus are normal and the alkaline phosphatase may be normal or slightly elevated.

Since the bone matrix is a protein substance, when there is a defect in the protein metabolism, the inadequately formed matrix cannot receive calcium and phosphate for deposition. This is particularly true in osteoporosis associated with malnutrition. In malnutrition there may be the additional factor of vitamin D deficiency. Scurvy leads to bone lesions because of the direct effect of ascorbic acid on the formation of bone matrix and on normal osteoblastic activity. The x-ray findings are typical.

In Cushing's syndrome, excess "S" or "sugar" hormone is produced.² This hormone is anti-anabolic and acts on all tissues, including bone. The most pronounced changes occur in the spine. The many characteristic features of this syndrome make the diagnosis clear-cut and the changes in bones and the kidneys are only incidental findings. Treatment of the bone lesions is the same as in Cushing's disease and depends upon whether it is due to adrenal hyperplasia, tumor or pituitary disease. Testosterone therapy is of value preoperatively along with potassium and a high protein diet to accelerate anabolic processes. Selye's "alarm reaction" and therapy with corticotropin and cortisone exert the same effect as does Cushing's disease.

Senile osteoporosis may represent merely an atrophy of bone with senescence or it may be a lack of production of androgens and estrogens. Treatment is the same as that for osteoporosis of the postmenopausal type. Steroid therapy has pronounced beneficial effect.

Idiopathic osteoporosis is uncommon. The cause of the disease is unknown but the findings are the same as those in osteoporosis from known causes. Treatment is difficult and there is no benefit from steroid therapy. In fact, this is a point of differential diagnosis.

Osteoporosis associated with acromegaly occurs occasionally and may be on the basis of hypogonadism.² Steroid therapy, particularly with estrogens, causes pronounced improvement. The bone disease

that occurs occasionally with hyperthyroidism may be secondary to increased catabolism causing increased bone breakdown and increased demands for protein, resulting in a protein deficit. In severe diabetes mellitus, osteoporosis may also occur due to protein deficiency plus acidosis.

Osteomalacia or "adult rickets" occurs when the bone matrix is normal but the calcium is not available for deposition. The level of inorganic phosphate may be too low to allow the calcium to be precipitated. Since the normal osteoblasts make every effort to calcify the bones, the serum alkaline phosphatase is high. The serum calcium and phosphorus levels may be normal or low. This condition is to be differentiated from osteoporosis, in which the serum phosphatase, calcium and phosphorus levels are normal, and from hyperparathyroidism in which the serum phosphatase and calcium are high and the phosphorus is low.

Since this condition occurs because of calcium lack, any situation where there is inadequate calcium absorption or increased calcium excretion will result in osteomalacia. The following causes of osteomalacia have been adapted from Albright and Reifenstein:²

- (a) Lack of vitamin D.
- (b) Renal acidosis $\left\{ \begin{array}{l} \text{Renal tubular acidosis} \\ \text{Fanconi syndrome} \end{array} \right.$
- (c) Idiopathic hypercalcuria
- (d) Hyperparathyroidism, postoperative

Osteomalacia due to lack of vitamin D—which plays a part in calcium absorption—is rare in this country. Loss of D may be due to decreased intake, increased loss (steatorrhea) or resistance to vitamin D.

Renal tubular acidosis is a relatively common cause of osteomalacia and nephrolithiasis. In this disease, there is insufficiency of the tubules but normal glomeruli. The tubular lesion may be the result of pyelonephritis or may be congenital. The normal function of the tubule is to produce ammonium ion and hydrogen ion and to excrete acid urine. The loss of these functions results in a loss of neutralizing ions to ferry the acid radicals (chloride and others) out in the urine. To substitute for this loss, fixed base including calcium is lost in the urine and the acids are excreted as calcium or potassium salts. The tendency toward low serum calcium is adjusted by loss of calcium from the bones; and, owing to stimulation of the parathyroids, there is an increase in urinary phosphate with a decrease in the serum level. The sodium level remains normal, possibly because there is mild dehydration and renal tubular mechanisms act to conserve sodium and excrete potassium.¹⁵ Hyperchloremic acidosis occurs, since excess base over fixed acid is lost, but the urinary

pH remains above 6.0 despite the acidosis. The potassium and inorganic phosphorus serum levels may be normal or low. The serum calcium and non-protein nitrogen may be normal and the alkaline phosphatase is elevated in proportion to the amount of osteomalacia. There are x-ray findings of osteomalacia (demineralization, pseudofractures) and nephrolithiasis and nephrocalcinosis. There may be a chronic acidosis and altered neuromuscular function. The urine contains a reduced amount of ammonium, and the titratable acidity is decreased. This disease is to be differentiated from "renal rickets" in which there is also glomerular damage and retention of phosphorus, sulfate, urea and creatinine.

This syndrome is thought by some investigators¹¹ to account for the hyperchloremic acidosis which frequently accompanies ureterosigmoidostomy, on the basis of tubular damage from infection and obstruction. Whether the hyperchloremia results from a tubular lesion or whether it is due to excess absorption of acid salts from the sigmoid in the face of poor renal function,¹⁷ therapy consists of a high alkali intake, rectal tube drainage and measures aimed to improve renal function.

Treatment of osteomalacia and nephrolithiasis from tubular acidosis consists of the use of alkali and vitamin D. The administration of base, such as sodium bicarbonate, spares the calcium and prevents further loss. The vitamin D induces increased calcium absorption from the gastrointestinal tract. Calcium intake may also be increased. Once the bone lesions have healed, vitamin D should be discontinued. Response to therapy is dramatic. The bone lesions heal rapidly and in some instances the renal calculi are reduced.

The Fanconi syndrome produces acidosis as a result of increased urinary excretion of organic acids (possibly due to decreased tubular reabsorption). This lesion is rare. To ferry these increased acid radicals, the kidneys must secondarily excrete increased fixed base, and this results in excess calcium loss. The calcium loss causes a tendency toward a low serum calcium, which causes a parathyroid stimulation leading to increased urinary phosphorus, lower serum phosphorus and correction of the serum calcium. In this condition, to meet the increased demand for coverage of the acid excretion, the kidney steps up tubular production of ammonia and titratable acid (H^+). In renal tubular acidosis, the basic difficulty is tubular impairment with a decrease in ammonia and titratable acid.

The features of this hereditary disease are rickets and decreased growth, renal glycosuria, alkaline urine, increased amounts of organic acids, ammonia, phosphorus and calcium in the urine, pronounced hypophosphatemia without hypercalcemia, decreased carbon dioxide combining power, no azotemia and degeneration in the tubular epithelium.^{2, 12} This con-

dition may be associated with cystinosis with or without cystinuria.⁴ The treatment suggested for this rare condition is the same as that for other renal acidosis—alkali, high calcium intake and vitamin D. Both kinds of renal acidosis allow excess calcium loss in the urine, which gives rise to a tendency toward low serum calcium, which in turn causes secondary hyperparathyroidism.

Excess renal excretion of calcium is largely responsible for the osteomalacia caused by renal acidosis. Idiopathic hypercalcuria, however, is the most usual of the metabolic disorders causing hypercalcuria.² Many persons who are "stone-formers" have idiopathic hypercalcuria⁷ and presumably there is a metabolic defect so that the kidneys excrete more calcium than they should for an otherwise normal serum calcium. In such cases there is no renal acidosis. The increased calcium loss leads to the same sequence of events as increased calcium loss from other causes and the end results are osteomalacia and nephrolithiasis or nephrocalcinosis. Treatment urologically should consist of the Shorr regimen to lower the phosphate-calcium intake. Simultaneous steroid therapy should stimulate the laying-down of calcium in the bone.

Immediately following the removal of a parathyroid tumor, osteomalacia may occur transiently due to the precipitous fall in calcium, but this is rare and may be prevented by giving adequate calcium.

Increased urinary calcium excretion by the kidney may also occur in patients with chronic pyelonephritis. The serum calcium level in this condition may be normal or low.

Milkman's syndrome¹⁴ is osteomalacia of a special type in which there are ribbon-like zones of decalcification with pseudofractures rather than generalized bone disease. It can be caused by any of the causes of osteomalacia and the treatment is the same as for osteomalacia from any specific cause.

DISCUSSION

Urologically, the end results of hypercalcuria and all types of metabolic bone disease are identical—namely, nephrolithiasis and nephrocalcinosis. However, the differential diagnosis and proper identification of the primary lesion in each case of hypercalcuria and renal calcium precipitation will lead to appropriate treatment and prompt improvement. The first step is to recognize that hypercalcuria is present by measuring the calcium excretion while the patient follows a controlled diet.

Hypercalcuria due to increased gastrointestinal absorption of calcium leads to hypercalcuria as a direct result of the excess intake. The blood levels of calcium, phosphorus and alkaline phosphatase are generally normal and decreased calcium intake results in rapid improvement.

Hypercalcuria due to increased bone resorption occurs in a group of diseases of which primary hyperparathyroidism is the most prominent. In this syndrome, there is hypercalcuria, hypercalcemia and hypophosphatemia. If the bones are involved, the earliest lesions are in the skull and lamina dura and the alkaline phosphatase will be elevated. Surgical removal of the parathyroid tumor results in cure. Chronic acidosis causes secondary hyperparathyroidism or "renal rickets." In this disease, the serum is elevated, calcium is low or normal, there is acidosis and renal disease and there is always bone disease with a high phosphatase. Treatment is to lessen the acidosis and the renal disease and to give calcium and vitamin D for the bone lesions. Metastatic malignant disease of the osteolytic type causes hypercalcemia because of increased bone destruction. The roentgenographic findings are typical and the serum phosphorus is most often normal. Treatment of the underlying malignant disease and, in many instances the administration of steroid, will effect remission in the hypercalcuria. Multiple myeloma may cause hypercalcemia and hypercalcuria but the serum phosphorus and alkaline phosphatase are normal. In addition, there are a host of diagnostic points which occur typically in myeloma. Paget's disease causes a very pronounced elevation in the phosphatase but there is normal serum calcium and phosphorus. The roentgen evidence is typical. Immobilization of patients with Paget's disease is particularly dangerous, and strict reduction of the intake of calcium, phosphorus and vitamin D is necessary. Boeck's sarcoid produces bone lesions similar to those of hyperparathyroidism but the lesions are mostly limited to the hands and feet and have a typical punched-out appearance. The serum and urinary calcium levels are high but the serum phosphorus is normal and the alkaline phosphatase may be normal or high. The serum globulin and protein are elevated. Treatment includes reduction of calcium intake and administration of corticotropin and cortisone.

Hypercalcuria due to decreased bone formation occurs with either osteoporosis or osteomalacia. In osteoporosis, there is a defect in tissue metabolism so that the bones cannot accept the available calcium. The defect may be in the osteoblasts or the bone matrix or on an idiopathic basis. In recumbency, or postmenopausal, osteoporosis, the serum calcium and phosphorus may be high and the alkaline phosphatase is normal. The skull and lamina dura are normal. Treatment by the Shorr regimen, mobilization and weight-bearing will prevent renal complications. In postmenopausal osteoporosis, steroid therapy (estrogens and androgens) causes dramatic response. Defects in the bone matrix may occur in any state of protein deficit (malnutrition), scurvy, and conditions in which there is excess anti-

anabolic hormone (Cushing's syndrome, "alarm reaction," corticotropin and cortisone therapy). Treatment is directed at the underlying condition, and in addition a high protein diet is given and testosterone is administered. Senile osteoporosis responds rapidly to steroid therapy. The idiopathic variety is uncommon and does not respond to steroids.

Osteomalacia is a condition of calcium lack. In this condition the serum alkaline phosphatase is high and the serum calcium and phosphorus may be normal or low. It may occur from a lack of vitamin D (rare), because of an idiopathic loss of calcium in the urine, or secondary to renal acidosis. Idiopathic hypercalcuria should be treated by the Shorr regimen and possibly administration of steroids. Renal acidosis of the tubular insufficiency type is due to calcium loss in the urine. It is characterized by hyperchloremic acidosis with alkaline urine, decreased urinary ammonia and decreased titratable acidity. Treatment consists of a high alkali intake, and administration of calcium and vitamin D in large doses and the response to treatment is dramatic. Renal acidosis of the Fanconi type also is due to excess calcium loss in the urine and treatment is the same.

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The Artificial Kidney and Related Procedures

A Report on Clinical Experience

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ALTHOUGH it has been some ten years since the successful application in man of artificial kidney devices,⁵ the procedure is not yet well known among physicians in general, and few have clear understanding of the underlying principles, the technique, or the indications or counterindications for hemodialysis and ultrafiltration.

There are many reasons for this lack of recognition. It has not yet been possible to demonstrate the clinical value of the artificial kidney in a manner acceptable from a statistical point of view. The apparatus is rather complex and successful use of it requires personnel familiar with the technical details and also with the underlying doctrine. Such equipment, technical assistance and, above all, such experience is expensive and time consuming to obtain and is available only in a few localities. In the course of several years numerous artificial kidney devices have been tried, some of which seem to give clinically disappointing results in spite of adequate chemical performance.^{6, 10}

This communication will describe briefly the principles and techniques of hemodialysis and ultrafiltration followed at Cedars of Lebanon Hospital, will present experimental and clinical evidence for the usefulness of the artificial kidney as a treatment, and will define indications and counterindications for its use.

MECHANICS OF OPERATION

All clinically applied artificial kidney machines make use of commercially available cellophane. A wet cellophane sheet is a sieve, which effectively restrains cells, viruses, bacteria and all molecules down to a molecular weight of about 20,000. Smaller particles pass through the pores of this membrane with a speed which is characteristic for each type of molecule. The average man has a glomerular filtering surface of about 15,000 square centimeters,¹⁵ of which one ten-thousandth consists of pores;⁸ the glomerular filtering membrane is believed to be about 2,000 Å¹¹ thick and the pores in it have an average diameter of 20 to 100 Å. In contrast, the Skeggs-Leonards artificial kidney has a

• The Skeggs-Leonards artificial kidney and related methods were applied by the author in about thirty instances in patients with various kinds of renal disease. The treatment brought about clinical improvement of varying degree and appeared to be life-saving in four of five patients with acute renal failure.

Treatment with the artificial kidney is indicated for patients with acute renal failure who develop clinical signs of uremia. The artificial kidney should be applied before the patient's condition has become irreversible.

Removal of edema fluid is possible with modern artificial kidney equipment and appears to extend the therapeutic possibilities of the procedure. The artificial kidney may be of help in barbiturate and other intoxications. It affords temporary palliation in certain patients with chronic uremia; it may be used to overcome acute exacerbations of chronic renal disease; it may make it possible to operate on uremic patients who otherwise could not withstand operation.

cellophane surface of 21,000 square centimeters, of which about one-third is taken up by the pores.⁸ The cellophane is about 250,000 Å thick and the pore diameter is 40 to 60 Å.⁷ When blood is placed on one side of such a membrane and a watery dialyzing solution on the other side, the small, diffusible molecules and ions will migrate from the site of higher concentration to the places where the concentration is lower. Balanced dialyzing solutions have been formulated which will repair defective electrolyte patterns in the blood and allow the washing out of waste matter from the blood.

Certain models of the artificial kidney, such as the Alwall or the Skeggs-Leonards, are not only effective dialyzers but also permit hydrostatic filtration of water from the blood. In many places the older artificial kidneys are now being superseded by the more versatile dialyzer-ultrafilters.

The delicate wet cellophane membrane must be mounted in such a way as to permit 200 to 300 cc. of blood film to flow over it every minute. The techniques of the preparation and use of the cellophane, its mounting and the composition of the dialyzing

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solution have not been standardized. Each center for artificial kidney work seems to have developed its own *modus operandi*. It has been noted that even minor variations of the procedure used by the author, such as the presence of wrinkles in the cellophane or a change of the temperature of the steam used for sterilization (superheated steam dries out the membranes and makes them less permeable⁷) can affect the performance of the apparatus. As the technical aspects of the artificial kidney vary from group to group so do the criteria for the use of the procedure and for the proper time of its employment. At present it is therefore not possible to generalize the experience gained with the artificial kidney in any one center; what is standard experience and expected performance in one place may be totally different across the street.

TECHNIQUE

The literature contains adequate descriptions of the Skeggs-Leonards artificial kidney and its application.^{13, 14} The author has modified Leonards' original technique as follows:

1. Each liter of dialyzing solution used contains: Sodium, 130 mEq; potassium, 4.5 mEq; calcium, 4.5 mEq; magnesium, 2.7 mEq; chloride, 105 mEq; bicarbonate, 27 mEq; lactate, 10 mEq; glucose, 10.0 gm.

2. Blood and dialyzing fluid are pumped in alter-

nating cycles of two minutes; this causes a rhythmic expansion and contraction of the blood compartments, which favors the contact of blood with the membranes and increases the clearance by a factor of about 40 per cent.

3. Blood is withdrawn and administered through a double-lumen catheter, which is inserted through a saphenous vein—a saving of one skin incision.

4. By means of a bedside test for urea the actual clearance of the machine is determined at the beginning of dialysis and the progress of the procedure is followed. This allows a comparison of the "expected lowering of the blood urea" (Chart 1) with the observed lowering. Certain pathological syndromes are characterized by a discrepancy between the expected and the observed urea concentrations—a fact that might be explained by abnormal delay in the diffusion of urea from the tissues into the blood.¹²

Once the artificial kidney device is set up and in working order, there is available a means for controlling the concentration of diffusible substances in the blood and in the body. Adequate artificial kidneys should have a urea clearance of about 200 cc. per minute and should clear other substances from the blood with proportional efficacy.¹⁶ An ideal ultrafilter-hemodialyzer can replace the function of the human glomeruli, but not of the tubules; it has no influence on the intermediary metabolism of fats or proteins or the anemia of renal disease. It can

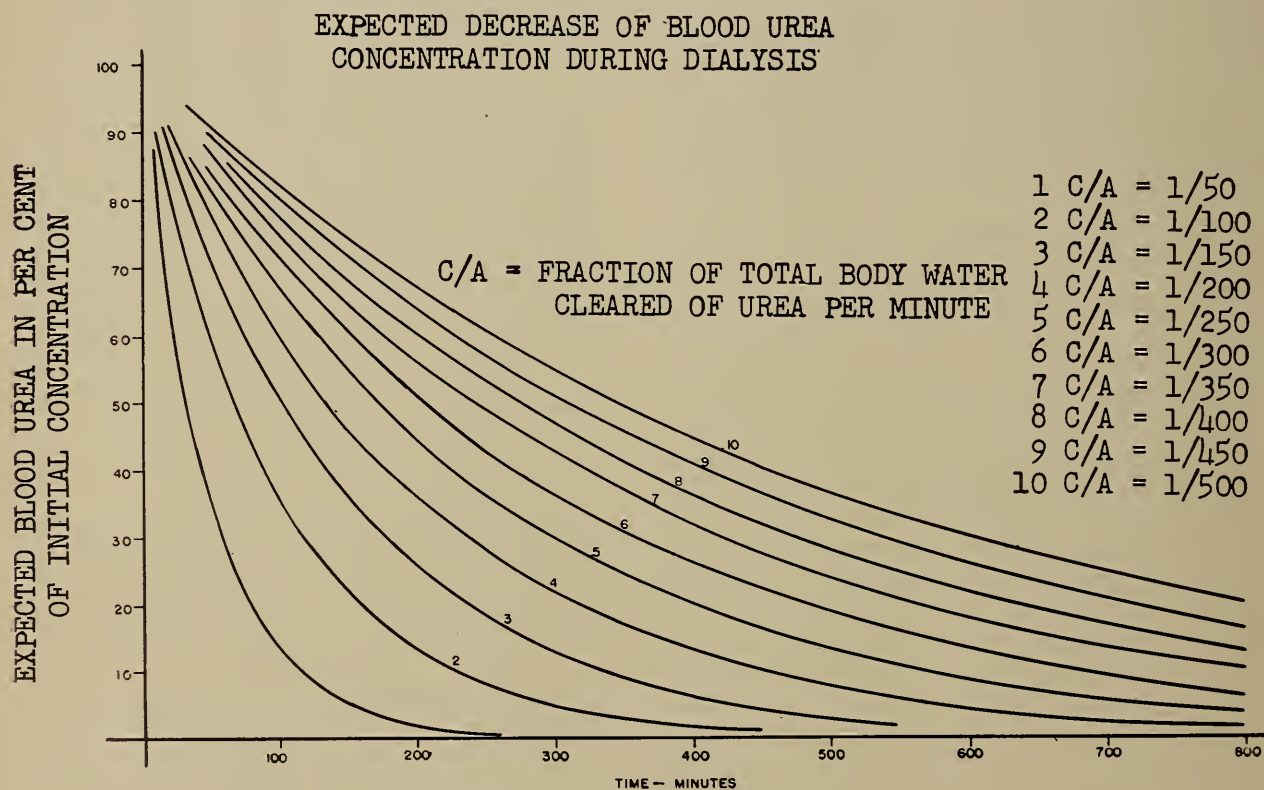


Chart 1.

treat the uremia, but not the kidney. It can prolong life—can buy time when more time is needed for repair and regeneration. It is estimated that, in an anuric human patient who has adequate conservative management and who is *in extremis*, one application of the artificial kidney should provide an extension of the life span of five to 14 days.

CLINICAL APPLICATION

It is customary to illustrate the therapeutic possibilities of a new procedure with animal experiments. Few such pilot studies are on record because the hospital wards, where artificial kidneys are usually found, are not well suited to this type of work. There is also the difficulty of bringing about in animals a condition that resembles acute renal failure in man, lethal when untreated and yet reversible. Experimental renal injury is usually either irreversible or else not lethal. It has recently been found that dogs will invariably die from acute renal failure when both kidneys are isolated (in order to interrupt collateral circulation) and the pedicles are clamped for 110 minutes. When such animals are treated in the best possible manner with the Skeggs-Leonards artificial kidney their lives can be prolonged sufficiently for repair and regeneration of the tubular epithelium and eventual recovery of the animals.¹²

The clinical possibilities of the artificial kidney are illustrated by the case of a totally anuric child who was kept alive for 81 days with repeated hemodialysis.⁶ The longest recorded survival of an anuric patient with conservative treatment alone is 27 days. The literature contains reports^{1, 4, 9} on about 20 patients whose survival should probably be attributed to the combination of conservative management with artificial kidney procedures. Likewise, in the following four cases of acute renal failure it was the consensus of the attending and consulting physicians that the favorable outcome should be credited to the combination of conservative and radical therapy, since conservative measures alone did not seem likely to maintain life.

CASE REPORTS

CASE 1. The patient, a 56-year-old woman, entered the hospital on May 5, after five days of anuria. Because of an increasing mass in the right upper quadrant of the abdomen an exploratory operation was performed on May 11, and a large hematoma of the abdominal wall and edema of the peritoneum were found. The kidneys were enlarged and harder than normal. The right kidney was decapsulated but the urine output did not increase. In spite of adequate conservative management the patient continued oliguric and became gradually more uremic. On May 20 she reacted only to painful stimuli and had convulsions in spite of normal serum calcium. The

serum creatinine content was 17.0 mg. per 100 cc. Ultrafiltration and hemodialysis was carried out with the Skeggs-Leonards artificial kidney No. 2. One thousand eight hundred cubic centimeters of fluid was withdrawn. On the morning of May 21 the patient sat up in bed and ate breakfast. The serum creatinine was 7.8 mg. per 100 cc. Two thousand cubic centimeters of urine was passed in the 24 hours following the procedure. Chemical and clinical improvement thereafter was rapid and complete.

CASE 2. A 48-year-old woman who had received several different antibiotics for a severe respiratory tract infection was not anuric at any time, but massive peripheral edema and abnormal urinalysis suggested renal disease. Uremia progressed rapidly, with vomiting, semi-coma, convulsion, pronounced peripheral edema and some pulmonary edema. The blood pressure was 220/120 mm. of mercury. The nonprotein nitrogen content of the blood was 160 mg. per 100 cc. and the serum creatinine 14.0 mg. per 100 cc. The Skeggs-Leonards artificial kidney No. 2 was applied and 3,200 cc. of fluid was withdrawn. The next morning the patient read the morning paper and ate a good breakfast. All clinical signs and symptoms of uremia had disappeared. Recovery has been rapid and complete.

CASE 3. A man 55 years of age, after a month of anuria and oliguria had serum creatinine of 23.0 mg. per 100 cc., nonprotein nitrogen of 176 mg. per 100 cc. and serum potassium of 7.2 mEq per liter. Severe pulmonary and peripheral edema were present. The patient was twitching and stuporous. Pronounced cardiac arrhythmia was noted. During dialysis-ultrafiltration 4,000 cc. of fluid was withdrawn. The cardiac rhythm returned to normal, the serum potassium fell to 4.3 mEq per liter and the creatinine to 11.4 mg. per 100 cc. The patient gradually recovered over a period of three weeks after the procedure.

CASE 4. A 15-year-old boy with blood in the urine became anuric and a week later was stuporous and disoriented. Pronounced peripheral and pulmonary edema were present. Gallop rhythm of the heart was noted. The serum creatinine was 14.2 mg. per 100 cc. The now obsolete Skeggs-Leonards artificial kidney No. 1 was used and 1,500 cc. of fluid was withdrawn. After the procedure the arrhythmia and the pulmonary edema disappeared, the patient appeared mentally alert and the serum creatinine was 12.0 mg. per 100 cc. Diuresis started the next day. The patient recovered completely.

The artificial kidney does not always help:

CASE 5. A patient 48 years of age received one unit of mismatched blood after hysterectomy and became anuric. Conservative treatment was very carefully managed and the serum electrolyte levels and clinical condition remained good. Slight mental confusion and pulmonary edema were noted nine days after the onset of anuria. Twelve hours later pulmonary edema became severe. The patient was cyanotic and dyspneic. She appeared to be confused and rapidly sinking. The artificial kidney pro-

cedure was carried out but the patient had no response and died 140 minutes after the beginning of the procedure, during which pulmonary edema and cyanosis had steadily increased. Two thousand cubic centimeters of fluid was withdrawn and the serum potassium fell from 7.2 to 6.0 mEq per liter during the procedure. Autopsy showed the typical renal lesions of ischemic nephrosis due to transfusion reaction. It was felt that earlier hemodialysis might have saved this patient.

USE IN CHRONIC RENAL DISEASE

The use of the artificial kidney in chronic renal disease has been advocated by several investigators^{1,3,8,10} who have noted that patients with chronic uremia may be made asymptomatic and kept comfortable for lengthy periods by dialysis. It has also been said that acute exacerbations of chronic nephritis or of malignant hypertension might be overcome by hemodialysis and that it should be possible to return the patient's general condition to the state before the onset of the acute episode. The author has used hemodialysis and related methods in about 20 instances of chronic renal disease. Clinical improvements of variable duration were observed in the majority of the patients; in one instance a moribund patient was kept relatively comfortable and productive for 14 months before he died. It is not known why some patients with chronic uremia seem to benefit more than others.

Corcoran² of the Cleveland Clinic recently wrote: "[In acute renal failure] dialysis will nearly always elicit a dramatic clinical improvement that may be sufficient to permit the resumption of conservative management with food and fluids given orally. In those patients made severely ill by the effects of trauma and infection, conservative management is definitely ineffective and dialysis is necessary for survival." There can be very little doubt that dialysis alone, properly applied, is a lifesaving measure in cases of acute renal failure in which overhydration is not a factor. When acute renal failure is complicated by excessive water intake or by edema it should be treated with a combination of dialysis and ultrafiltration as soon as it becomes apparent that conservative management alone is not sufficient to effect recovery. These procedures are well tolerated and not dangerous. The author has not observed untoward incidents with the Skeggs-Leonards artificial kidney No. 2.

DISCUSSION

In order to insure the survival of a patient with acute renal failure the most important single consideration is the proper time to use dialysis. There has been much unwarranted generalization about the spontaneous regenerative powers of renal tubu-

lar epithelium. It is true that a great many patients with acute renal failure will recover after about eight to ten days of conservative treatment. However, a great many such patients die in spite of the best possible conservative management, and it is believed that many of these deaths can be avoided by timely application of the artificial kidney. During the last two years the author has been called to administer the artificial kidney treatment in 16 instances in which the patient died just as the equipment was being set up. Earlier consideration of the radical treatment might have helped. Once a patient with acute uremia develops cardiac irregularities, pulmonary edema in spite of good water balance, mental confusion, twitching, intractable nausea or vomiting, intractable acidosis or serum potassium above 7.0 mEq per liter, the artificial kidney procedure should be instituted at once regardless of the duration of the preceding anuria. When the symptoms of uremia appear in patients with acute renal failure, deterioration is usually extremely rapid and death may be a matter of 12 to 24 hours. Although the application of the artificial kidney has at times saved uremic patients with coma and convulsions, it would seem that patients treated before the onset of these often terminal and irreversible signs would have a better chance to recover.

There is good experimental and some clinical evidence that the artificial kidney may be life-saving in intractable cases of barbiturate poisoning, bromide poisoning and other intoxications caused by diffusible substances.

There is a natural inclination to reserve radical treatments for cases in which using them may be life-saving. In chronic uremia, however, the artificial kidney procedure can at best be only a palliative treatment, and while the author does not encourage the treatment for palliation only, neither would he deny it to desperately ill persons until ways are available to predict who will derive substantial benefit and who will not. In other centers the artificial kidney has been used to advantage to prepare uremic patients for surgical operations and to overcome acute exacerbations of chronic renal disease. This would seem a logical use.

Artificial kidney procedures should be used with great caution in patients with signs of a bleeding tendency. During the artificial kidney procedure the clotting mechanism of the patient is disturbed by the heparin that is given as a part of the procedure (average 150 mg. intravenously) and by the slight fall of the circulating platelets which sometimes occurs. As hemodialysis was performed successfully in a patient with a bleeding peptic ulcer, it is felt that some hemorrhagic phenomena are not an absolute contraindication. A definite hemorrhagic state is, however, a reason to rule out dialysis. This is especially true when the hemorrhages are in the

brain or the retina. Patients with acute renal failure and a bleeding tendency who need radical treatment can still be treated with other methods such as replacement transfusion.

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Prevention of Suicide

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WITHIN THE PAST YEAR two papers on the problem of suicide^{1, 4} have been presented before the California Medical Association. Despite this sign of the medical profession's interest in this gravely important problem, overwhelming evidence indicates that neither physicians nor lay persons realize that in the United States suicide is ninth among the causes of death, according to one classification. In many areas it exceeds tuberculosis, the eighth cause. In certain sections it is fourth or fifth among the causes of death of persons 55 to 69 years of age.

The suicide rate in California is about 50 per cent above the national average, which according to Bauer¹ is 11.4 per 100,000 population. The average over our nation is a suicide every half-hour. In 1949, in California, 1,738 persons died of suicide—more than died of each of three types of cancer, of chronic rheumatic heart disease, of diseases of early infancy or of pneumonia. The incidence of suicide in the state was 18.1 per 100,000 persons. In Los Angeles it was 16.5, in San Francisco 28.0 and in Alameda County 17.3 per 100,000. In Alameda County in 1948 the 157 deaths from suicide, about one every two days, exceeded the 139 deaths from traffic accidents. In California in 1951 there were 1,815 certified suicidal deaths, about five a day.

In 1952 the emergency department of Herrick Memorial Hospital, Berkeley, treated for suicidal attempts 80 persons, of whom six died. In Oakland, Highland Hospital admitted 211 persons, 73 men and 138 women, because of suicidal attempt. For 156 it was the first attempt, but 55 had been two to five times previously admitted for this reason. Of these, 159 persons were sent back home, 40 were hospitalized, eight were sent to jail and four died. The number who received definitive psychiatric treatment cannot be determined. These figures probably are representative of the usual management in California county hospitals of patients who have attempted suicide.

These national and regional statistics do not represent the whole problem. Automobile accidents include a number of suicides or suicidal attempts. Families succeed in hiding a number of genuine suicides. It is estimated that self-destructive impulses or accident proneness are factors in about

• *Suicide is the ninth major cause of death in the nation. California, according to the latest comprehensive figures (1949), ranks about 50 per cent above the national average. Yet the importance of suicide as a cause of death is gravely underestimated. At hospitals and other agencies only emergency treatment is given before discharge of persons who attempt suicide, although it is known that many will repeat the attempt. Rarely is psychiatric evaluation carried out or definitive treatment prescribed. Suicidal symptoms are often ignored in other cases.*

Physicians have a responsibility, as in any disorder, to recognize signs and symptoms of impending suicide and to use all means of prevention.

Prevention could be forwarded by the education of physicians and laymen in detecting early signs of depression, in recognizing accident proneness, and in insisting upon legal control of use of barbiturates, a common means of suicide. Lay associations should encourage individuals with suicidal impulses to go to psychiatric clinics for help. Police should learn how to deal with suicidal attempts, and hospitals should include psychiatric examination and advice as to treatment of all such persons. Suicidal attempts should be registered and reported to public health officers in the same way as are other dangerous diseases. More research should be done on case records of these patients, in order to better understand motivations and means of prevention.

half of all nonfatal accidents. "Chronic" or "partial" suicide can be seen in a large proportion of alcoholics and those with psychoneurotic invalid reactions. Many suicidal attempts are never recorded in vital statistics. In many of the cases in which death occurs weeks or months after suicidal attempt the death is not recorded as suicide. In addition, about a fifth or a sixth of persons who kill themselves or attempt to do so, tried to kill or succeeded in killing from one to four or five other persons beforehand.

Complete figures would thus show perhaps as many as 50,000 suicides a year in the United States.

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In addition there are about five attempts for each completed act—a large area for preventive work.

THE PHYSICIAN'S RESPONSIBILITY

Unfortunately, most patients admitted to hospitals after suicidal attempts are treated symptomatically. Stomachs are washed or emergency surgical treatment given, and the patients then dismissed—to repeat the act again in many cases. Rarely is psychiatric evaluation carried out and definitive treatment prescribed. Newspaper accounts often state that the patient had been in ill health or despondent over illness and had threatened suicide.

The main problem is the failure on the part of many physicians to recognize in their daily practice signs and symptoms of impending suicide. Psychiatrists are greatly concerned with this problem, but many nonpsychiatric practitioners seem to have very much less concern. There is a tendency to feel that a person should be allowed to die if he wishes.

Sometimes a physician, by failing to understand him, inadvertently increases a patient's latent wish to die. Arguing, cajoling or jollying him may only increase his despair, and make him feel the futility of life all the more. Equally bad is the idea that the patient does not mean his suicidal thoughts. Every suicidal threat should be considered seriously. If tactful discussions serve to establish definitive rapport, in a case of psychoneurotic, hysterical or reactive type of depression of benign form, the physician may be justified in treating the patient by psychotherapy as a calculated risk. The patient must begin to feel some hope for working out with the doctor's help a solution to his problem. If, however, rapport is not established, the physician should refuse to accept further responsibility unless the family will accept advice to place the patient in protective environment—that is, psychiatric hospitalization.

The physician's responsibility thus comes down to the basic problem: diagnosis—usually evaluation of the depth of the depression and the degree of suicidal hazard present. Such a problem should never be lightly dismissed by sending the patient on a trip or vacation. The first responsibility is to establish the patient's degree of insight and his cooperativeness under treatment; the second responsibility is to educate relatives, who are often prejudiced, and get them to back up a treatment program—not always an easy task.

DIAGNOSIS

In diagnosis the Number One question is whether a suicidal attempt is always a symptom of mental illness. Certainly the impulse is not a normal reaction to life. One who tries to kill himself is always

suffering from some psychic or undue emotional reaction to his life problems. Normally adjusted persons do not attempt suicide, although probably almost everyone has at some time thought of suicide more or less seriously. Even persons who have strong impulses toward suicide may later become happy and useful after the impulse passes.

Another frequent mistake is to yield to the temptation to prescribe barbiturates for insomnia. Suicide from overdoses of barbiturates is increasing. There is also the danger of addiction. In some persons the use of barbiturates reduces inhibition and thus increases the suicidal risks; in others it may make the person confused, so that he takes an accidental overdose. Physicians may inadvertently increase the hazard by prescribing too large an amount. Again, some patients will deliberately obtain an oversupply by canvassing various physicians. About 20 per cent of suicidal attempts are by barbiturates.

The basic problem is, then, the diagnosis of depression. About half of all suicidal attempts are carried out by patients with psychoneurotic depression and a few by patients with organic syndromes. The rest of the attempts are by psychotic persons. About 70 per cent of psychotic depressions are of the true manic depressive types, in which suicide is a constant problem and attempts occur in 15 to 20 per cent; the other 30 per cent are of involuntal and schizophrenic types. In all such cases the patients need strict psychiatric hospitalization care and can be expected to recover under present-day methods of treatment. The two classes of patients therefore include the potential suicides who have never made an attempt and the patients who repeatedly threaten suicide or have made an actual attempt. In the former group, as previously stated, it is a question of evaluating a true depressive reaction, since all such patients are potential suicides.

In taking the patient's history, one must note the patient's description of changes within himself. Furthermore, he often complains only of physical symptoms, and the emotional reaction behind it must be unearthed by watching for changes in emotional reactions. To put it another way, in any patient's history a functional complaint that is not backed up by true organic symptoms or findings, should make a physician look for evidence of depression, including the depth and degree of handicap to the individual. In order to make the diagnosis (often missed) one must look for evidence of reduced energy output, changes in the way things appeal to the patient, his change of interest, and a pronounced change in feeling tone. It is important to keep in mind that psychogenesis is not always present. Many cases are spontaneous and of endogenous type, especially in the manic-depressive group. Indeed, about half of such patients have had previous attacks, with spon-

taneous recovery within a few months, even though a supposed chronic organic syndrome was treated.

Symptoms of Depression

1. *Insomnia.* Especially characteristic is early morning awakening. Later on comes an inability to fall asleep. Insomnia is one of the most persistent complaints, about which patients are often very much concerned; and they may blame it for everything. It is caused by depression. Deeply depressed persons have bad thoughts at night. They may get up, pace the floor, smoke. These are highly significant signs of oncoming severe depression.

2. *Anorexia.* With the oncoming depression patients lose appetite and lack interest in food, with subsequent loss of weight. Frequently they seek medical aid for gastrointestinal upset, which may be the first major complaint. Further inquiry brings out statements such as that all foods "taste the same" or "like sawdust." They have pronounced constipation and use laxatives or enemas for a condition owing only to the small residue in the bowel. The patient may claim that he eats enough, but careful investigation will show an inadequate, low calorie intake.

3. *Loss of interest and drive.* The patient's formerly pleasurable interests no longer appeal to him. He will admit his loss of feeling in this regard. A deeper depression gradually engulfs everything, with loss of feeling for family, reading, hobbies or recreation. The patient may just sit and mope. At times family informants can confirm this lack of interest, if the patient covers it up. There is usually loss of libido or sex drive, to a degree of frigidity or impotency depending upon the depth of the depression, and patients greatly concerned over this problem are especially prone to suicide. Patients also feel mental and physical sluggishness and retardation, so that they have to drive themselves to get to work in the morning or even to get up. As a rule, all these symptoms are exaggerated in the mornings and lessen toward evening.

4. *The mood reaction.* Many patients will not admit despondency and, when asked, will say they feel fine. Only further questions can bring out that they feel discouraged or disgusted and blame all their complaints upon some vague physical condition or upon insomnia. Occasionally, in a depressed mood the patient may say that he feels "wretched," or "miserable," or "bad all over," or something like, "I just can't describe to you how bad I feel." It often requires various tactful questions to elicit the true undertone of depression.

The next step is to evaluate by careful inquiry the depth or degree of depression and the patient's feeling or handicap or hopelessness. The physician may ask about a wish to die or, to put it another way, a wish to give up and quit.

Type of Depression

When by these means the presence of a depression is established, benign depression must be differentiated from malignant depression. If no overt attempt at suicide has ever occurred, a type of therapy that can be safely carried out should be selected. If the patient has made definite threats or has already made an attempt, it is much safer to recommend immediate hospitalization and evaluation, including psychiatric consultation.

Something may be learned from the method of suicidal attempts. Some types of persons are purely hysterical and will take large amounts of aspirin, iodine or other nonlethal drugs. Minor self-inflicted injuries, including wrist slashing, are often insincere attempts. When the victim wants more to alter the environment than to alter his finite status in the world he chooses an unreliable, reversible method. The resulting stir may bring the satisfaction that he really sought in thinking, "They'll be sorry." But persons who resort to violent poisons, firearms or throat cutting have malignant depression. Gas and strangulation techniques have a reputation for effectiveness. Very bizarre means of self destruction occur in frankly psychotic patients.

It is important to remember that the most dangerous time for a person with suicidal tendencies is the period when he seems to be recovering from his emotional crisis.

PREVENTION

How are we to prevent suicide? The very fact that the patient has once considered taking his own life suggests an emotional climate fraught with aggressive tendencies. He has already hit upon the device of turning his aggression inward as a solution to some distressing problem. Therefore, any threats and gestures, however insincere, are not to be taken lightly. But if the patient's suicidal preoccupations are serious, his relatives must be instructed to look out for signs of inertia, lack of interest, self-depreciation and other symptoms of depression or signs of withdrawal, and at the onset of these warning signs to obtain adequate medical attention.

Psychological tests like the Rorschach often help to assay the suicidal potentials. In case of doubt, hospitalization should be recommended as early as possible. If a nonpsychiatric practitioner feels unable to evaluate the problem fully, he should recommend psychiatric consultation and make sure that some responsible family member arranges for it. Patients are usually too indecisive to do so themselves, but the large majority can, through someone's influence, be brought under psychiatric observation. If the patient's behavior is involuntary and he is uncooperative, the family should be advised to file a war-

rant of apprehension at the district attorney's office and to take the patient into custody at the county hospital for evaluation and definitive treatment.

Near the end of hospital treatment of depression great caution must be exercised. Premature removal on the excuse of homesickness is common; the relatives give in to the patient's pleas and take him out too soon. Some patients conceal their real intent and use such pretexts as homesickness in order to get out and accomplish suicide. It is the physician's duty to warn families of this hazard.

Treatment of Depression

Modern treatment of depression is one of the most gratifying procedures in psychiatry. Treatment varies, depending on the type and the degree of emergency—suicide may have been attempted or threatened—and on the specific kind of depression.

Milder psychoneurotic depressions may be treated by out-patient care through psychotherapy. If the patient does not respond within a reasonable period or if the suicidal hazard increases, he should be hospitalized and given electroshock therapy.

When a suicidal attempt has occurred, emergency treatment requires hospitalization and symptomatic treatment of the injury, this to be followed by definitive psychiatric treatment. Since so many attempts are made with barbiturates, specific therapy for coma must be readily available.

Treatment of Acute Barbiturate Poisoning

While treatment for barbiturate coma is not completely satisfactory, the following methods, described elsewhere in detail,³ have been found fairly adequate and at times life-saving.

A large dose may cause a condition that may not respond except to treatment with the artificial kidney, a device which is available in only a few places.

Subconvulsive electrostimulation and intravenous administration of metrazol both counteract the cerebral depressing action of barbiturates and preserve respiratory function. The author often combines the two methods.

Electroshock therapy is a specific preventive of suicide—a life-saving procedure as well as a curative treatment for individual attacks of depression. It must be administered intelligently, with close attention to the individual patient and with careful follow-up treatment by psychotherapy and other adjunctive measures, in order to insure against relapse. Prophylactic shock therapy is also an effective treatment for breaking up recurrent types of depression and possibly for interrupting the manic-depressive cycle. Prefrontal lobotomy is also sometimes indicated, especially for depression of chronic relapsing types.

The following examples illustrate various types of depressions, all suicidal risks, with the results of treatment.

CASE 1.—*Psychoneurotic, reactive depression.* A man 26 years of age had for several months felt fatigued and had lost interest in work and family life. He had had insomnia, loss of appetite and depression. Two weeks before consultation he stopped work, although insisting that he had a good job, loved his family and had no worries about money.

He discussed rather freely the people close to him, except for his wife, and then his face became expressionless, his voice flat and his words curt. He continued to deny having angry feelings toward her, even after the differences of demeanor were pointed out. At the next interview he reported his surprise at finding that he had been angry with his wife—for several months. He traced the following causes. Despite the much better pay and financial security of his present job, he was dissatisfied and wanted to return to driving a milk truck, a job he had held prior to army service and had liked the best of any work. His wife opposed the consequent return to a small town, less pay and poorer living conditions. He thought he had accepted her viewpoint. He now realized his anger and resentment, feelings he had been unable to admit to himself, let alone express, and had kept them "bottled up." As he was able to discuss these problems the symptoms of depression lifted and he returned to work.

Here a simple technique of ventilation and discussion allowed the patient to express his resentment and overcome his depression by softening his over-strict conscience. The technique is to enable the patient to work out his aggression and hostile feelings instead of turning them in on himself and thereby increasing his suicidal drive.

CASE 2.—*Involuntional depression with suicidal desires.* A housewife, aged 47, stated that about two months previously she had suddenly lost her desire to live. Her family physician told her upon consultation that she was getting hysterical and needed hormonal therapy. Estrogenic hormones were given two to three times weekly. After the second injection she felt more restless and after the third she noted more headaches. Upon picking up a knife she had "an awful sensation" and quickly dropped it. When she reported this to the physician he told her to go out for a walk. She was still much afraid, fearing self-harm, and had thoughts of turning on the gas oven. The physician, upon hearing this report, told her to "stick your head in cold water."

The patient then asked her mother-in-law to take her away. She discontinued the hormonal injections and felt somewhat better. The family physician finally referred her to an internist for further medical treatment, and he in turn referred her for psychiatric treatment when she told him her fears about insanity.

This patient, with a typical case of involuntional depression, very frankly reported to her physician her suicidal ideation. The hormonal treatment prescribed was, for this disorder, valueless.² The patient might very readily have carried out actual suicide

during the two-month interval before she was referred for psychiatric treatment.

CASE 3.—*Involuntional depression with barbitol coma.* A 53-year-old male business manager of a newspaper, in barbiturate coma, was hospitalized. Reflexes were absent and the blood pressure was 95/60 mm. of mercury, respirations shallow and the pulse thready. After two hours of treatment, consisting of gastric lavage and subconvulsive electrostimulation, the patient began to regain consciousness and was transferred to the psychiatric department. A day later he was still confused, but stated, "I felt that was the best way out. I am worth a lot dead; alive I am a burden on my wife. I had a good job until a few months ago. Then it all went up in smoke."

From the wife it was learned that for about four years the patient had progressively become more depressed. During the past year, under medical care he had taken barbiturates and Dexedrine.[®] For the preceding month he had talked of suicide. The night of the attempt he was cheerful with his wife before going to bed. She noticed his snoring was strange and called an ambulance when she could not awaken him. The patient, who had been let out of a responsible executive position because of a change in management, was unable to find satisfactory work and had quit several fair positions. He was getting deeply involved financially. Two days before the attempt he told his wife that his insurance would provide for her "if something happened" to him.

Psychiatric evaluation indicated a fairly typical involuntional depression with ideas of self condemnation and hypochondriasis. Emergency treatment had averted a serious suicidal attempt. The patient was hospitalized 30 days and given eight electroshock treatments. After treatment he was mildly euphoric for a few weeks. Thereafter he was observed from time to time in office interviews. He took over the management of a newspaper and gradually straightened out his financial problems. He maintained emotional stability and 18 months later showed no signs of relapse.

This case illustrates a rather typical involuntional depression, with signs that could have been recognized much earlier. Proper treatment could have prevented the complete break and the serious suicidal attempt. It also illustrates the excellent result obtained by emergency life-saving treatment of barbiturate coma and also the favorable response to electroshock treatment in this type of depression.

CASE 4.—*Manic-depressive disorders.* A woman 33 years of age, brought in by the police with lacerations of wrists and neck, was exsanguinated and in shock. The patient, ill for four years, had alternated between depressive dependence and overactive, aggressive independence, and had been three times in psychiatric hospitals after previous suicidal threats. A divorce suit by the husband and a spontaneous abortion precipitated the present attempt.

After surgical repair of the lacerations and blood

transfusions, the patient was transferred to the psychiatric department. Her mental status typified a severe depression with paranoid projection against her husband. According to previous psychiatric diagnoses, the illness was considered a psychoneurosis, mixed type with anxiety and depressive features, of psychogenic origin—a conflict between her hostile and aggressive demands on people close to her and her need to measure up to her own high standards. Previous treatment had consisted of psychotherapy.

On the basis of the cyclic recurrences of elated and depressive mood swings, a diagnosis of manic depressive psychosis was made. The patient was hospitalized 49 days and nine electroshock treatments were given, followed by supportive psychotherapy for a year. During this time the divorce action was completed. The patient became mildly euphoric and overactive, but obtained a good position as department head in a bookstore. She became more stable after separation from her husband, and some months later obtained custody of her only child. To date she has had no complete psychotic break.

This case illustrates the fairly satisfactory management of a manic depressive state and a serious attempt at suicide. The ultimate outcome is uncertain because of the cyclic nature of the patient's illness.

RECOMMENDED PROGRAM FOR PREVENTION OF SUICIDE

Following is an outline of a program that would help reduce the number of suicides:

1. Education of physicians and laity on ways and means of preventing suicide, especially early detection of depression; the relationship to accident proneness; and legal restraints upon use of barbiturates.
2. Establishment of lay associations devoted to prevention of suicide through education about danger signals and motives for suicide; and through encouragement of individuals with suicidal impulses to come for help to psychiatric clinics.
3. Education of police in how to deal with suicidal attempts.
4. Education of hospital administrators on their responsibility to include adequate, complete psychiatric treatment of all persons brought into hospital emergency departments on account of attempted suicide.
5. Research on case records in order to increase understanding of motives and therefore of means of prevention; also complete studies of the presuicidal type of personality, in the effort to spot potential suicides.
6. Education of nonpsychiatric practitioners into how to recognize psychotic depressions and how to obtain family cooperation in getting the patient

under psychiatric treatment, with notification of police in cases in which the patient is uncooperative.

7. Registration of suicidal attempts, with report of all suicidal attempts to public health officers, in the same way that reportable diseases are required, with follow-ups by public health nurses in order to insure that the patient is receiving adequate psychiatric care.

A logical source of help is to be found in life insurance and accident insurance companies. Although life insurance companies realize the extent of the problem of suicide and keep accurate statistics upon the incidence of deaths by suicide, they have not been helpful in a preventive program. They must know that many cases are covered up or called accidents in order to collect insurance money. These companies contribute money for research in various diseases, especially cardiac, in the effort to prolong life, but so far they have shown little interest

in the very practical problem of prevention of suicides. A contribution of money for psychiatric research and also for help on an educational program would be a very constructive step in launching a nationwide preventive program. Most health insurance policies exclude from benefits all hospital or medical costs resulting from attempted suicide.

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Ammoidin (Xanthotoxin) in the Treatment Of Vitiligo

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UNTIL QUITE RECENTLY the results of treatment in vitiligo have been disappointing to say the least. Occasionally the use of para-aminobenzoic acid or gold sodium thiosulfate, or the local application of oil of bergamot or tar solutions seemed to encourage repigmentation in some areas of vitiligo. Such results were so rare, however, that practically all physicians informed patients with vitiligo that no effective treatment was known and that to camouflage the depigmented areas with an appropriate cosmetic covering was indeed the best advice that could be given. Investigations concerning the cause of vitiligo have not yet been fruitful enough to provide a basis for therapy.

In 1947 Fahmy and Abu-Shady⁶ reported that natives in the Nile Delta had used for many centuries, with some success, the fruits of a plant growing in the marshy areas near the river for the treatment of vitiligo. The natives took 4 to 12 grams of the powdered fruit daily, which caused nausea, vomiting, diarrhea, faintness and even coma. Many patients discontinued the treatment because of these effects. In some of the patients who were able to persist in taking the powdered fruit the areas of vitiligo would become inflamed and vesiculation and bullae would develop. After the inflammation subsided such areas would often begin to repigment. The plant from which this fruit was obtained for the treatment of vitiligo was identified by Fahmy as *Ammi majus*, a member of the *Umbelliferae* (Parsley family). This plant is found throughout the Mediterranean area and in many other parts of the world. According to Jepson,⁹ *Ammi majus* is also known as Bishop's weed, and grows in the Napa valley in California. Lammerts,¹¹ at the author's request, grew the plants easily from seed at the Descanso Gardens in Southern California.

Fahmy and Abu-Shady⁸ isolated three crystalline substances from the fruit of *Ammi majus*, namely, ammoidin, ammidin, and majudin. Later Fahmy, Abu-Shady, Schönberg and Sina^{7, 13} showed that these substances were identical with three previously named chemicals, xanthotoxin, imperatorin, and

• Eighteen patients with vitiligo were treated with two crystalline substances, xanthotoxin (Ammoidin) and imperatorin (Ammidin) from the plant *Ammi majus*. Four patients improved more than 50 per cent. One had complete cure, but depigmentation recurred after a few months. Six patients had moderate improvement (less than 50 per cent), three had slight repigmentation, and in five cases there was no improvement. These results are similar to those reported by other investigators.

Pronounced local inflammatory reactions are to be expected after exposure to ultraviolet light in nearly all patients treated with xanthotoxin. In one case prolonged sensitivity to sunlight, manifest by vesiculating dermatitis, occurred.

bergapten, respectively, which are all furocoumarines. Lerner and associates¹² expressed preference for the group name psoralen, 8-methoxypsoralen being identical with xanthotoxin. For reasons of priority the older terms, xanthotoxin, imperatorin, and bergapten, are used in this presentation. These chemicals have been isolated from many different plants, xanthotoxin occurring to the extent of 2 per cent in the fruit of *Fagara Xanthoxyloides*, which also contains bergapten. Oil of bergamot, which contains the active principle bergapten, has been used in the past to sensitize the skin in the treatment of vitiligo, and, for the same purpose, Arabs are said to have used *Ruta graveolens* (which is rich in bergapten) mixed with the fruit of *Ammi majus*.

Following the isolation of these active principles from *Ammi majus*, toxicity studies by Gruhzit (reported by Fahmy⁸) showed that for mice the minimal lethal dose of xanthotoxin given intraperitoneally was 310 mg. per kg. of body weight, and for imperatorin was 330 mg. per kg. Elwi⁵ in a study of the toxic effects of xanthotoxin and imperatorin in guinea pigs established that the minimal lethal dose was 400 and 800 mg. per kg., respectively. In animals that died of overdoses of xanthotoxin it was observed on autopsy that there were pronounced changes in the adrenal glands, consisting of congestion, rupture of sinusoids and total lipid exhaustion. Guinea pigs that were continuously given sub-

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The xanthotoxin and imperatorin used in this study was kindly supplied by Professor I. R. Fahmy of the pharmacognosy department of the faculty of medicine of the Fuad I University in Cairo, Egypt.

TABLE 1.—Results reported with extracts of *Ammi majus* (xanthotoxin and others) in the treatment of vitiligo

Authors	Number of Cases	Type of Treatment†	Excellent Result (Cured)	Improvement Good (More Than 50%)	Improvement Moderate (Less Than 50%)	Improvement Slight	No Improvement	Complications
El Mofty* 1948	14	1a, 3a	4	2	1	2	5	Bullae, nausea, giddiness, depression
El Hefnaoui 1950	6	2	1	3	1	1	....	Vesiculation
El Mofty 1952a	26	1, 1a, 2, 3, 3a, 4, 5	2	8	9	3	4	Nausea, vomiting, headaches, severe toxic reactions from crude drug
El Mofty 1952b	15	6	5	5	1	....	4	
Sidi and Bourgeois-Gavardin 1953	106	1(14), 2(86), 3(6)	7	10	17	50	22	Phototrauma, photosensitization (5 cases), nausea, vertigo
Lerner, Denton and Fitzpatrick 1953	9	3a	1	1	1	2	4	Nausea, epigastric distress, diarrhea, increased nervous tension
Korting, Friederich and Adam 1953	5	2	....	1	1	2	1	Bullae in 3 cases
Wolf 1953	2	2	....	2	....	....	....
Couperus	18	1, 1a, 3a, 6	....	4	6	3	5	Photosensitization, nausea, bullae
Total	201	....	20	36	37	63	45	

* Apparently 14 cases of those reported by El Mofty in 1948 are not included in his series of 1952.

† Legend: 1 = application of a solution of ammoidin and ammidin; 1a = application of a solution of ammoidin; 2 = the use of ammoidin and ammidin topically and by mouth; 3 = ammoidin and ammidin orally; 3a = ammoidin orally; 4 = majudin orally; 5 = powdered fruit of *Ammi majus* orally; 6 = intradermal injection of ammoidin and ammidin.

lethal doses of this drug (200-350 mg. per kg.) had, in addition to changes in the adrenal glands, degenerative changes in the liver and some cloudy swelling and glomerular congestion of the kidneys. Changes produced by giving doses of 800 mg. of imperatorin per kg. of body weight were less pronounced, but sublethal doses caused fatty degeneration and necrosis of the liver. After administration of small doses of these drugs (2 mg. per kg.) daily for five months, significant changes in the liver were noted. Investigations regarding the safe dosage of these drugs in man established that 0.7 mg. per kg. of xanthotoxin and 1 mg. per kg. of imperatorin were apparently not toxic. Bergapten was tolerated in doses of 30 mg. daily. In clinical use, however, smaller doses were used for all three substances.

In 1948 El Mofty² reported upon the first 20 patients treated with extracts of *Ammi majus* by local application, by oral administration and by a combination of these means. Six of the patients were reported as cured, two had pronounced improvement, two had good improvement, three were slightly improved, five had no improvement and two were still under treatment. Local reactions, dependent on increased sensitivity to sunlight, such as pronounced

erythema and vesiculation, occurred in the majority of cases. Nausea, vomiting and depression were common with the oral use of the crude extracts, but these were almost eliminated with the use of the pure crystalline substances. Since this initial clinical report, further studies have been published by El Hefnaoui,¹ El Mofty,^{3, 4} Sidi and Bourgeois-Gavardin^{15, 16} Lerner and co-workers,¹² Wolf¹⁷ and Korting and co-workers.¹⁰ They are summarized in Table 1. Although there is some variation in the percentages of cure and improvement in the various series, the results are quite similar. Variations are, to some extent, due to differences in the manner in which the drugs were used. Complications during treatment were the same as those reported originally by El Mofty, except that it became clear that oral administration of the pure crystalline extracts in tablet form still produced in some patients nausea, epigastric distress, diarrhea and increased nervous tension.¹² Sekla¹⁴ reported the exact constituents of the tablets.

The largest series of patients with vitiligo treated with extracts of *Ammi majus* was reported by Sidi and Bourgeois-Gavardin.^{15, 16} Of the 106 patients included in their report, six received only oral medi-

cation, three or four tablets a day, each tablet containing 7.5 mg. of xanthotoxin and 2.5 mg. of imperatorin. Fourteen patients were treated by painting the affected areas with an alcoholic solution of 1 per cent xanthotoxin and 0.5 per cent imperatorin, while 86 patients had both oral and topical therapy. Twenty-two of the 106 patients showed no improvement, 50 had some repigmentation, 17 were "improved," ten had almost complete repigmentation and seven were cured.

El Mofty⁴ reported a new method of administering the crystalline xanthotoxin and imperatorin, namely by the intradermal route. In a series of 15 patients, five were cured, five showed good improvement, one moderate improvement, and four did not benefit.

PRESENT SERIES

During the last four and one-half years the author has treated 24 vitiligo patients with xanthotoxin or xanthotoxin and imperatorin. Eighteen of these patients are included in the report in this presentation; the others have come too recently under the author's care to be reported in this list. All of these patients were treated by topical application of a 1 per cent alcohol and glycerine solution of xanthotoxin. After the affected areas were painted with the solution of xanthotoxin, the patients were exposed to increasing doses of ultraviolet light, starting with 15 seconds, or to 15 minutes of sunlight. The frequency of topical application and exposure to ultraviolet light was determined by the degree of inflammatory reaction produced. It was attempted to apply the medication and expose the area to sunlight daily. In five of these cases 0.5 per cent imperatorin was added to the solution. Three of the 18 patients received, in addition to the topical medication, ten drops daily of the 1 per cent solution of xanthotoxin by mouth for a period of two to six months. Two of these three patients complained of considerable nausea when taking the drops, but in spite of this they continued this form of therapy for several months. In the author's belief, there is not much evidence that the oral administration of *Ammi majus* extracts improves noticeably the chance for a cure over the method of topical application.

Four additional patients were treated for periods varying from two to eight months with a 1 per cent solution of imperatorin (ammidin). In none of them was there any sign of repigmentation or even pronounced erythema. Oil of bergamot produced a greater light sensitivity of treated areas of vitiligo than imperatorin did. Xanthotoxin, on the other hand, was noted to be many times more light sensitizing than oil of bergamot, which contains bergapten (majudin). All patients in this series experienced what Sidi and Bourgeois-Gavardin called phototrauma, a temporary hypersensitivity to ultraviolet radiation, evidenced by erythema, edema,

vesiculation and bullae formation. Some of the patients in the present series developed only pronounced erythema, but in ten of the 18 cases bullae developed, causing a condition that was, in some instances, severe enough to interfere with the regular occupation of the patient for two or three days. None of the patients had observable toxic reactions to the topical or oral administration, except possibly for the nausea in the three cases previously mentioned. In these three cases no abnormalities were noted in routine examination of urine and blood.

In one patient, a 19-year-old girl of light complexion who had vitiliginous areas on the lower part of the left cheek of several months' duration, a bulbous reaction to the ammoidin-ammidin solution developed after two weeks of application. Following this reaction the solution was used only four times between August 6, 1953, and October 9, 1953. By November 1 the areas of vitiligo had become completely repigmented, constituting cure. However, around the first of December (the xanthotoxin solution not having been used for nearly two months), the patient was exposed to what was otherwise not an excessive amount of sunlight, whereupon pronounced erythema and vesiculation developed at the sites that had previously been treated with xanthotoxin. This reaction continued to reappear upon exposure to sunlight for several weeks, and only slowly abated in intensity. After the hypersensitivity began to wane, some of the vitiliginous areas that had become completely repigmented returned partially to their previous state. Because of this pronounced and prolonged sensitivity to sunlight, further treatment with xanthotoxin was considered unwise. Sidi and Bourgeois-Gavardin noted five cases in their series in which a similar reaction occurred. They considered it photosensitization, which, in their opinion, contraindicated further treatment with extracts of *Ammi majus*.

Of the 18 patients treated, none had complete cure (except one patient, temporarily, as was noted previously). Four patients had improvement of more than 50 per cent, five had moderate improvement but less than 50 per cent, four had only slight improvement, and five had none. In some cases improvement began three weeks after the start of treatment, and in others repigmentation did not begin until treatment had been carried on for four months. In one patient who was treated four and a half years ago and who improved more than 50 per cent, the repigmentation has remained practically unchanged since. The average period of treatment was three months, the shortest period productive of maximum repigmentation was two months, and for the most part the patients who had the greatest improvement were treated for from four to six months. Repigmentation started usually around the hair follicles, but in some of the lesions the new pigment first appeared



Figure 1.—Follicular repigmentation in case of vitiligo treated with 1 per cent solution of xanthotoxin applied daily for five months.

at the margins of the lesion and extended toward the center. In all cases, including those in which there was no improvement, there was pronounced hyperpigmentation of the normal skin near the areas of vitiligo where the xanthotoxin solution had been applied beyond the areas of pigment loss. This hyperpigmentation may be prevented by protecting the normal skin margins with a sunprotective cream or liquid, such as one containing 10 per cent para-aminobenzoic acid.

DISCUSSION

The results obtained in the 18 cases here reported are comparable to those reported by other observers. Of 201 patients with vitiligo treated with extracts of *Ammi majus*, approximately 10 per cent had complete cure, 18 per cent had improvement of more than 50 per cent, 18 per cent had improvement of less than 50 per cent, 32 per cent had slight improvement and 22 per cent were not improved. A 10 per cent rate of cure is not very high, nor is 28 per cent if the group with more than a 50 per cent improvement is included, yet these results are encouraging when compared with the almost total absence of cures by all previous methods of treatment. It is possible that compounds related to xanthotoxin and

imperatorin may be developed which will be more effective. A definite drawback to the use of crystalline extracts of *Ammi majus* is the pronounced inflammatory reaction produced in the areas of vitiligo. Any patient who is to be treated with these drugs should be warned of the severity of the local reactions that may follow. Despite the warning, it has been noted that patients usually are quite willing to tolerate the temporary discomfort if there is a fair chance of repigmentation. At present the author is willing to treat only areas of vitiligo that are on the exposed parts of the body where they may be a drawback to earning a living or cause an emotional problem. Some observers have concluded that lesions of the exposed areas are more resistant to treatment than are those on covered parts of the body.

The author believes it has not been established that the oral administration of xanthotoxin and imperatorin adds much or anything to the effectiveness of topical use. Sidi and Bourgeois-Gavardin¹⁶ said that repigmentation did not occur in patients they treated when extracts of *Ammi majus* were given by mouth only. Lerner¹² and associates, on the other hand, reported some repigmentation in five of nine cases in which xanthotoxin was given only by mouth. Their better results by this method may be due to the fact that the average length of administration was seven months. El Mofty³ seems to have treated only one or two patients by the oral route exclusively, and in those cases some repigmentation occurred, but apparently five patients who had been receiving mixed or local therapy continued on oral therapy alone.

In the author's opinion, treatment might be started with topical administration, with the combined method of oral and topical use reserved for cases in which there is no response to local therapy alone. However, the opinion might be voiced by others that the frequent vesicular reaction to the topical application is the most objectionable complication of therapy, and that therefore the possible toxic results from oral administration of the drug are really a lesser evil. Continued experience with these drugs will ultimately define the best method of administration. Whenever internal use of these drugs is resorted to, cephalin cholesterol flocculation tests should be carried out once a month as suggested by Lerner and co-workers.

Another question that must be considered in the evaluation of this form of therapy for vitiligo is the permanence of the repigmentation. In most of the cases reported thus far the patients have not been observed for a long enough period after cessation of treatment to state what percentage of those cured or greatly improved retain all the improvement. There is some evidence that a fair proportion of those who have repigmentation subsequently have partial or complete return of vitiligo. Three patients observed

by the author for more than four years after completion of treatment which had brought about either good or moderate improvement, had developed some loss of pigmentation varying from slight to considerable. El Mofty³ mentioned at least four patients in his second series of 26 cases who had recurrence, although some of them had response to subsequent treatment. Wolf¹⁸ said that one of the two patients who had more than 50 per cent repigmentation, returned after several months with loss of pigment in the previously improved areas. Closely connected to this problem of recurrences is the question of how long a patient must be treated in order to get the optimum results. Perhaps the average of three months which seems to have been used by most investigators is not sufficient. Further investigations should elucidate this point.

El Mofty³ said that xanthotoxin initiates repigmentation, that imperatorin accelerates the process and prevents the development of new patches, and that bergapten fixes the new pigment, makes the reaction irreversible, and shortens the period of treatment needed for cure. If this is so, it is clear that many of the patients treated with xanthotoxin have not had adequate treatment. However, the evidence supporting El Mofty's claim is at present insufficient to warrant accepting it as more than hypothesis. Of the intradermal route of administering xanthotoxin and imperatorin, El Mofty said that "this way of local application is far from being the ideal method of treatment." Yet the cure rate of 33 per cent associated with this method would suggest that it should be investigated further.

Reports by some observers indicated that patients who have diabetes, tuberculosis, hepatic or renal disorders should not be given xanthotoxin by mouth.

Sidi and Bourgeois-Gavardin¹⁶ pointed out that ultraviolet radiation should not be given for several hours after a xanthotoxin solution has been applied, since the solution will filter out all radiation below 4,077 Å. The effective range of ultraviolet radiation for the treatment of vitiligo with xanthotoxin is 2,900 to 4,077 Å. Great care should be taken that the exposure to ultraviolet light at the beginning and throughout the course of treatment be no more than the patient can tolerate. In the author's experience, this usually was about half the time for the average erythema-producing dose.

The mechanism by which xanthotoxin initiates repigmentation in areas of vitiligo is not clear, but it is known that the drug, when topically applied, is the most powerful of all known agents for bringing about sensitivity to light. El Mofty² suggested that what takes place is stimulation of the enzymatic process upon which melanin formation is dependent in the melanocyte (which may be depressed in the area of vitiligo) or that xanthotoxin removes or neutralizes the cause of this depression of melanin

formation. In light of the fact that application of xanthotoxin to the normal skin produces hyperpigmentation, he expressed belief that this drug rather stimulates melanogenesis than inhibits melanin disintegration. Lerner and co-workers¹² suggested that perhaps xanthotoxin inhibited sulfhydryl groups, which might stimulate melanin production. They demonstrated, as did also Korting¹⁰ and associates, that xanthotoxin does not influence in vitro the tyrosin-tyrosinase reaction, nor does it affect the chromatophore system of frogs. Korting suggested that the action of xanthotoxin is in the nature of a photodynamic sensitization similar to that which follows internal administration of eosin.

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To Prolong a Miserable Existence

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WE ARE FORTUNATE to live in a day of feverish scientific investigation. Almost daily we are made aware of progress about us. We witness facts which only a few years ago seemed wild imagination or were beyond our ability to imagine. Fortunately there is a continuous driving urge on the part of both patients and physicians to translate as rapidly as possible the results of scientific investigation into practice in the relief of disease and its symptoms. In this atmosphere of constant activity it may occasionally be well to look backward in order to judge how much or how little we may have progressed in relation to the ideas and observations of our forbears. I have selected for this backward glance, which I am asking you to share with me, the problem of treatment, prevention and cure of arteriosclerotic heart disease and angina pectoris.

At least as early as 1683 the relationship between angina pectoris and coronary arteriosclerotic heart disease was recognized by a few. Theophile Bonet,² a brilliant physician born to a medical family, published about that time a treatise known in its English version as a *Guide to the Practical Physician*, in which he describes a variety of "palpitation of the heart which is more frequent and much more violent and comes from the cardiac arteries in which the fault is with an obstruction or a spasmodic affection. The first disease is usually continual and often incurable especially if it comes from consumptive lungs or a tubercle at the root of the arteries or some bony excrescence whereby they are half stopped up or compressed. Even if at any time they be there and it can perfectly be known it would be in vain to endeavor to remove them, but rather this only must be done, we must give the patient some ease by a hypnotic to prolong a miserable life a little further." One must note that Bonet's scholarly observations are of a rather gloomy variety.

During the 18th century a number of brilliant men were interested in angina pectoris, some from a bright and some from a gloomy point of view. Doctors Macbride and Smith⁴ of Dublin, in the fifth volume of the *Edinburgh Commentaries*, described cases of angina pectoris cured by administering drugs which produced "issues" of bowel and urine, and by means of the application of blistering agents

to the skin. In spite, however, of the optimism of these authors, Caleb Perry⁵ in his far more extensive 167-page treatise, published in 1799, felt confident that the cases described by these authors actually represented palpitation (probably paroxysmal tachycardia) rather than angina pectoris. Perry's observations are well worth reading in their entirety, but we will content ourselves with a few brief quotations:

"It may be supposed that temperance in eating and drinking, abstaining from violent body exertions, and an attention to all the well known means of obviating inflammatory diathesis may have considerable effect in preventing that organic lesion of the coronary arteries which constitutes the syncopy anginosa. It is sufficient for me to have mentioned these means of prevention, little expecting that a knowledge of them will induce mankind to guard against a rare and remote effect while they are not deterred from habits of intemperance by those fevers, dropsies, and other disorders which they every day see to be their equally fatal and more immediate consequence."

"A fact [that] is well known to those who feed pigs and even birds of all kinds [is that they] are more speedily fattened by having flesh or animal fat mixed with their farinaceous foods. We should, therefore, attempt to reduce fullness of habit by diminishing or wholly abstaining from flesh meats, and this restriction by lessening the variety of the patient's food, will also at the same time probably diminish his disposition to err in point of quantity."

One can find a number of allusions to the relationship between overnutrition and angina pectoris among the early writers. William Heberden,³ in his classic description of angina pectoris, read at the Royal College of Physicians in London, July 15, 1768, stated: "I have observed something like this affection of the breast in one woman who was paralytic, and have heard one or two young men complain of it in a slight degree, but all the rest whom I have seen, who are at least 20, were men and almost all above 50 years old, and most of them with short neck and inclined to be fat."

In a letter written by Samuel Black¹ of Newry, Ireland, to Thomas Percival, and by him communicated to the Medical Society of London, March 10, 1794, Dr. Black referred to the relationship which he had observed between angina and obesity. He then noted: "One gentleman who has written a

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theory of this disorder supposes it to be of a gouty nature, and that it is in fact nothing else than irregular gout affecting particularly the diaphragm, for which reason he thinks it ought to be named diaphragmatic gout. For my own part I am ignorant of any histories or dissections relating to this complaint that can afford a foundation for such an opinion. It may unquestionably have been complicated with the gout, but if a physician will not carefully discriminate between a casual conjunction and a necessary connection, his practice will in many instances be unsuccessful, his judgment erroneous, and his errors fatal."

With Dr. Black's warning fresh in our minds let us quickly move to the present day. Important and essential statistical data are being accumulated in numerous centers relative to the relationship between coronary arteriosclerosis and the degree of obesity, the quantity of dairy products in the diet, the size and number of fat droplets in the circulating blood, the rapidity with which lipoproteins will float to the surface of an ultracentrifuge. Even such matters as the number and size of hairs on the chest and the number of awards obtained in high-school athletics have been carefully studied in relation to early coronary artery disease. If useful knowledge is obtained this type of statistical study is essential, but in attempting to treat coronary artery disease let us carefully heed Dr. Black's advice suggesting that the physician must discriminate between casual conjunction and necessary connection. It is conceivable that

since there may be a statistical relationship between the numbers of hairs on the chests of young men and the occurrence of coronary artery disease, one might set up a research project to study the frequency of anginal attacks before and after the careful plucking of all visible hairs from the chest. If anyone wishes to carry out such a study, allow me to suggest that he not entitle the clinic where the hairs are removed as a *Center for the Prevention of Myocardial Infarction*.

We stand, I feel sure, on the threshold of a new era. The causes of coronary artery disease will be much better understood. The future promises alleviation or even cure. Today, however, we are in much the same relation to coronary disease as was Theophile Bonet in 1683 when he proposed that we must give the patient some ease by a hypnotic (and possibly some nitroglycerin) to prolong a miserable existence a little further.

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Epidemicity of Poliomyelitis

Possible Role of Seasonal Variation in Food Quality

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AS GROWING PLANTS do not absorb phosphate readily when soil moisture is depleted, the quality of food varies seasonally. Lowering of phosphate availability from the soil is associated with a decrease of protein and phospholipids as well as phosphate in plant and animal products derived from the soil. This seasonal phenomenon has attracted attention among agricultural workers because of its importance in animal health.^{3, 4, 12, 23}

A seasonal variation which is significant in animal health should be worthy of study in regard to its possible effects on human health, even though multiple sources of food would make the effect of this seasonal change less precise in humans. Particularly, the suggestion is advanced that this seasonal fall of phosphate, phospholipids and protein in food should be studied as to whether it may be a factor in epidemics of poliomyelitis by lowering resistance to the disease. Despite all the research done on the question, the seasonal incidence of poliomyelitis has not been explained.^{2, 14} Since the seasonal lowering of food quality corresponds in general with the late summer and fall prevalence of poliomyelitis, it is important to consider the possibility that there is some connection.

The present inquiry on the magnitude of seasonal change in food quality was prompted by observation of a localized epidemic of poliomyelitis in Humboldt County, California, in 1951 at the time of prolonged and severe drought. The possible significance of a rainfall deficiency in poliomyelitis epidemics is substantiated by descriptions of the excessively dry weather conditions which appear in the early reports of epidemics in Vermont and Massachusetts.^{8, 16}

Hart, Guilbert and Goss¹² reported upon the decrease in phosphate and protein content of forage in California during the dry season (Chart 1).*

In general the climate of the north temperate zone is such as to bring about seasonal rise and fall in the protein and phosphate content of forage. Alterations in the seasonal trend occur from year to year as the climate varies. In Texas, the effect of rainfall is usually reflected in increased content of phosphate in forage in the month immediately following the heaviest precipitation.³

The phosphate content of the blood of drought-

• Seasonal variations occur in the phosphate, phospholipid and protein content of foods. The lower content occurs in the dry season. This is most often in the summer and fall months, which is the usual time of year for epidemics of poliomyelitis. Question is raised as to whether epidemics of poliomyelitis are a consequence of the host-virus balance being shifted in favor of the virus during this season because of the lower nourishing power of foods common to the daily diet.

grazed animals gradually decreases. Depleted blood is associated with poor quality meat. Investigators at the Kansas Agricultural Experimental Station ob-

SEASONAL CHANGES IN RANGE FORAGE

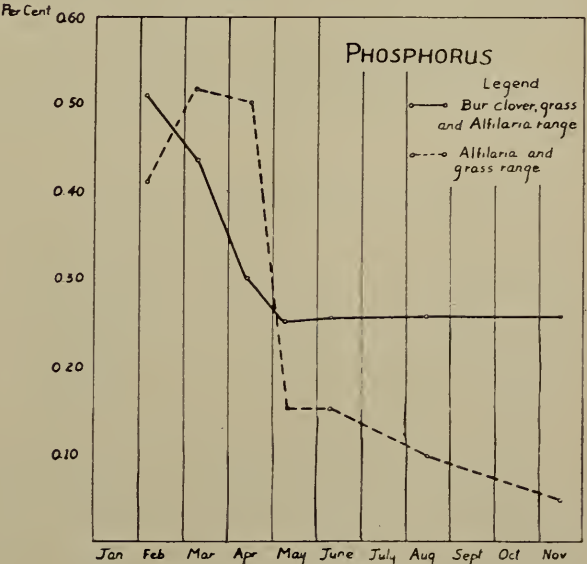
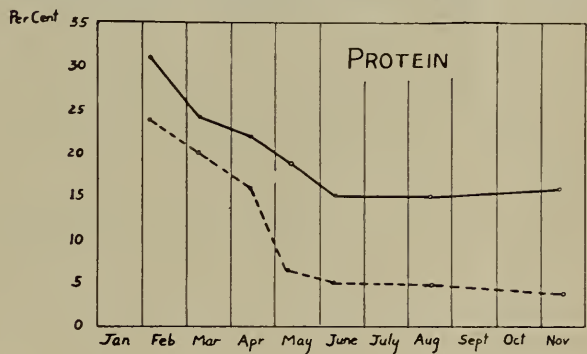


Chart 1.

*Reproduced by permission from the University of California Division of Agricultural Sciences.

served that low-phosphate beef had three distinctive characteristics.¹¹ Because of changes in the phospholipids, it lacked flavor and had a tendency to spoil easily during storage. It also contained an abnormally large quantity of water. In sheep¹⁸ tissue formation is delayed by a low-phosphate diet. Ingested protein is absorbed but, in the absence of phosphate, the amino acids are broken down and excreted by the kidney instead of being formed into body tissue. Thus, beef and mutton slaughtered in the dry summer and fall cannot be expected to nourish people to the extent that they do in the spring, when the forage provides more phosphate and protein.

Dairy products are even more important than meat as a principal food staple in the American diet. When milk is inspected, phosphate and protein are measured together in a composite known as solids-not-fat. It has been found that solids-not-fat are lower in the summer and fall.¹⁰ More significantly, they have been generally declining over the past 50 years. In England, solids have declined from 9 per cent to less than 8 per cent of whole milk. In California, the permissible minimum for milk solids was lowered by law in 1947 from 8.5 per cent to 8.15 per cent.⁷

Good farm practices can reverse this serious drop in milk solids. Decayed vegetation worked into the soil absorbs and holds water. This helps the roots gather phosphate. Two farms, one in Pennsylvania²² and one in England²⁴ raised the phosphate and protein content of milk 20 per cent by proper attention to the soil on which the forage for the cattle was grown.

Butterfat quality is also influenced by changes in the seasons. Price²⁰ noted that a fraction of butterfat important in bone healing and control of dental caries is present in butter produced when cows are eating fresh green pasture from land of high mineral content, but is absent from butter produced during dry seasons of the year.

Shifting attention from foods of animal origin to those of vegetable origin, the following table shows the range of phosphate content of various plant products.⁵

VARIATION IN PHOSPHATE ASH OF CROP

	In Per Cent
Winter wheat, grain.....	39.2 to 53.7
Maize, grain	37.6 to 53.7
Peas	26.2 to 44.4
Garden beans	27.1 to 46.6
Potatoes, tubers	8.4 to 27.1
Grapes, entire fruit.....	9.0 to 27.2
Asparagus, young stalks.....	13.8 to 21.9

In addition to the seasonal decrease in the phosphate content of food, the phosphate in water drops to practically nothing in the summer and fall.^{13, 21} On the other hand, in the spring months water may contain enough phosphate to contribute significantly

to the supply of that mineral to crops under irrigation.¹⁵

Algae and crustacea are dependent on the amount of phosphate in water.^{9, 26} Since they are part of the food cycle of fish, fresh-water fish are subjected to conditions encouraging a phosphate and consequent phospholipid and protein deficiency during the fall season.

Calcium content is well maintained during the dry conditions that bring about phosphate deficiency in food,^{3, 12} which further aggravates phosphate deficiency by interfering with absorption of the diminished amount of phosphate present.¹⁹

Animals are vulnerable to the seasonal changes in phosphate supply, for phosphate is not maintained in available body reservoirs although it is a major constituent of bone.¹⁷

DISCUSSION

Two other investigators have suggested that the phosphate availability from soil be given consideration as a factor influencing resistance and contributing to the epidemiology of poliomyelitis.

Albrecht¹ pointed out that the epidemic of poliomyelitis in 1946 was predominantly in the north central states, an area where the more calcareous soils give rise to lowered phosphate availability from the soil. Brumby⁶ noticed that before bone meal was used to lessen phosphate deficiencies in cattle, cases of poliomyelitis were being reported at the same time local cattlemen were complaining about symptoms of phosphate deficiencies in cattle. Brumby further observed that the counties reporting the most cases of poliomyelitis were those in which phosphate deficiency in the soil was a glaring agricultural problem, and that the incidence of poliomyelitis steadily rose over the years in those counties where the topsoil and consequent water-holding capacity of the soil was being decreased by over-cropping and erosion.

Neither of these scientists ventured a suggestion as to how lowering of phosphate availability from the soil would specifically influence susceptibility to poliomyelitis. In looking into the possibility that a seasonal lowering of food quality diminishes resistance to poliomyelitis, one must bear in mind that this factor may be companionate with principles of virus distribution and immunity found to be of significance in poliomyelitis and infectious disease in general. Certain facts that are now mysterious in the epidemiology of poliomyelitis may be of value in contributing material for definitive study. Important in this respect is the occurrence of epidemics in areas of more advanced civilization while backward countries continue to enjoy benign endemicity. It would be pertinent to determine whether the contrast in food quality related to the seasons is

more crucial to people subjected to the changes of modern civilization than it is to those people of primitive countries where the nutritive balance has not been upset by the use of refined foods of many kinds and where the demand for nutritive factors is somewhat lower because of the lowered metabolism and decreased cellular mass resulting from a state of relative starvation.²⁵

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Rauwolfia Serpentina

Prolonged Use in Elderly Hypertensive Patients

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THE NEWEST of the hypotensive agents, the alkaloids of *Rauwolfia serpentina*, have been widely used in the United States in the past year. Although for centuries they have been used empirically in India for a variety of conditions, that they were effective in relief of hypertension was first commented on by Bhatia¹ in 1942. Subsequently other clinical investigators working in India confirmed the effectiveness of the drugs for that purpose.^{2, 4} More recently, Vakil⁶ in a short-term study observed a significant decrease in both systolic and diastolic blood pressure of patients to whom the drug was given. Wilkins and Judson⁸ treated 39 patients with *Rauwolfia* alone for short periods of time and observed an average drop of 26 mm. of mercury in the systolic pressure and 17 mm. in diastolic pressure. Ford and Moyer³ used Rauwiloid®* as the sole hypotensive agent in 42 patients for short periods and expressed belief its greatest usefulness was in the treatment of mild hypertension or, in combination with hexamethonium, in more severe cases. Seliger⁵ and Vida⁷ also reported brief studies in which it was noted *rauwolfia* had better effect than barbiturates.

None of the investigators mentioned presented long-term observations, nor has the effectiveness of the alkaloids in older hypertensive persons been evaluated. The purpose of the present report is to relate observations on the effect of Rauwiloid in a group of older arteriosclerotic-hypertensive patients who were followed for over a year.

The subjects were 22 members of the domiciliary unit of the Veterans Administration Center, Los Angeles. They were all ambulatory and on unrestricted diets with the exception of two who were on a low sodium regimen. Rauwiloid was the only hypotensive agent used during the period of study. None of the patients was receiving barbiturates.

The blood pressure of each subject was recorded once a week throughout the period of study by one of two observers. No specific questions were asked regarding anticipated side effects. The patients were encouraged to report any unusual symptoms. Thus the side effects noted in this communication were

• In a group of older, arteriosclerotic hypertensive patients treated with an extract of Rauwolfia over a long period, a mild hypotensive effect was noted after weeks, or occasionally months, of therapy. No dramatic responses were seen, but the so-called "tranquilizing" effect was readily apparent and was appreciated by the patients. Side effects were usually relatively minor, were transient and rarely necessitated stopping the drug.

mentioned voluntarily by the patients. Pertinent data with respect to the cardiovascular status of these patients at the onset of study are shown in Table 1.

At first some of the subjects were given a *Rauwolfia* extract and others a placebo, neither the medical personnel nor the patients knowing which were receiving which. It was soon realized that a definite but mild hypotensive effect could be elicited in short term therapy in some of the patients. Therefore, all the patients were treated with one of the *Rauwolfia* extracts. At first they were given tablets of ground root of *Rauwolfia serpentina*. Subsequently the alkaloidal extract became available and was used in the remainder of the study. The earlier crude preparation was identified in terms of its content of the root but the purified preparations were identified according to alkaloidal content. The tablets used for the greater part of the study were 2 mg. tablets of alseroxylon fraction (Rauwiloid) and the dosage was one or two tablets at bedtime. For short periods, one tablet three times a day was given.

The group studied comprised older hypertensive patients who undoubtedly had major arteriosclerotic components (Table 1). Many of them were known to have had hypertension for over five years with only slight involvement of heart, brain or kidneys.

In Table 2 can be seen the average of the blood pressures at various times during therapy. Five of the 22 patients had decrease of at least 20 mm. of mercury in the systolic and 10 mm. in the diastolic pressure during the first ten weeks of therapy. Eight others had a similar decrease during the first year of therapy. Four more patients had a 10 mm. decrease in both systolic and diastolic pressure. Thus 17 of the 22 patients had mild hypotensive effect after varying periods of administration of the drug.

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*Riker Laboratories' brand of a reproducible alkaloidal mixture from *Rauwolfia serpentina*.

TABLE 1.—Data on condition of 22 hypertensive patients in higher age brackets before use of Rauwolfia extract.

Patient	Age	Race	Duration Hypertension (years)	Highest Blood Pressure Before Study (mm. mercury)	Cardiac Symptoms	Electro-cardiogram	Fundi* Classification	Cerebral Symptoms
1.	62	White	6	230/132	HCVD Angina	A	2	CVA
2.	61	White	2	196/116	0	N	0-1	D
3.	64	White	2	210/120	0	A	1	0
4.	59	White	3	216/118	0	A	1	0
5.	57	White	1	210/112	0	N	1	0
6.	63	White	4	208/120	0	N	1	H
7.	66	White	9	230/134	0	N	1	D
8.	55	White	1	204/118	0	N	2	DH
9.	65	White	2	208/106	0	A	1	CVA
10.	61	White	15	226/128	HCVD Failure	A	2	H
11.	61	White	11	252/130	HCVD	A	1	H
12.	56	White	18	190/130	0	N	2	0
13.	56	Negro	16	202/122	0	N	2	0
14.	65	White	17	224/118	Angina	N	1	CVA
15.	59	White	1	178/102	0	N	1	H
16.	63	White	11	204/118	HCVD	A	2	H
17.	54	White	5	192/114	0	N	2	0
18.	64	Negro	8	196/122	0	N	2	DH
19.	61	White	5	184/108	Angina	N	0	DH
20.	71	White	20	238/118	0	A	2	H
21.	65	Negro	14	210/130	Angina	A	1	H
22.	56	White	2	206/108	0	N	....	H

Abbreviations: HCVD = Hypertensive cardiovascular disease. H = Headaches. N = Normal. D = Dizziness. A = Abnormal. CVA = Cerebrovascular accident.

None of these patients had evidence of renal failure as indicated by nitrogen retention.

*Keith-Wagener classification.

TABLE 2.—Blood pressure determinations during therapy with Rauwolfia extract.

Patient	Control* Period Including Placebo	First 10 Weeks of Therapy	Last 10 Weeks of Therapy	Placebo† Eight Weeks
1.	180/105	170/100	170/105	185/100
2.	180/115	160/95	160/100	.....
3.	175/90	155/95	165/90	175/100
4.	205/100	195/100	185/95	.....
5.	185/100	160/90	165/90	.....
6.	170/110	160/95	150/90	165/100
7.	200/110	205/110	180/95	195/105
8.	175/110	170/110	.....	.....
9.	180/100	165/90	160/90	185/105
10.	205/105	180/100	170/95	.....
11.	235/120	220/110	185/105	195/110
12.	175/100	155/90	.....	.....
13.	185/110	175/100	145/85	165/90
14.	200/105	170/90	165/90	195/100
15.	165/100	150/90	145/85	150/95
16.	190/95	195/100	200/100	205/95
17.	180/100	160/95	160/90	175/100
18.	175/110	170/105	180/110	185/105
19.	170/110	170/95	165/95	185/100
20.	235/110	230/115	205/110	.....
21.	195/105	190/100	155/80	185/90
22.	180/100	185/90	170/95	.....

*Blood pressures are averages of at least six weekly determinations.

†After completing 62 weeks of therapy.

The 14 patients who were observed for 62 weeks received placebos at the end of that period, and 12 of them thereupon had a rebound in blood pressure.

During the course of treatment more than 70 per cent of the patients said, unasked, that they felt better. It is, of course, difficult to disassociate this symptomatic improvement from the psychotherapeutic effects of weekly medical attention, but such remarks as "I sleep better," "I'm less jittery"

and "I feel good" were often heard. Of the 13 patients with headache or dizziness, eight at some time noted relief of these symptoms.

Blood cell counts and blood urea nitrogen were within normal limits at the end of the study, as were results of cephalin flocculation and thymol turbidity tests. During this period, no complications of hypertensive vascular disease occurred.

Side effects were generally mild. At the start of therapy five patients complained of increased frequency of bowel movement. This cleared without change in administration of the drug. One patient who had a mild drop in pressure complained of dizziness after eight months of therapy. This was attributed to the medication, as relief and reappearance of dizziness were correlated with the administrations of placebo and drug respectively. No nightmares or nasal congestion were noted and no gastric intolerance for the drug was manifested.

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CASE REPORTS

- **Pulmonary Atresia with Patent Interauricular and Interventricular Septal Defects Causing Functional Cor Biloculare in a Patient with Dissociated Dextrocardia**
- **Hexamethonium Contributing to Fatal Shock in Hypertensive Epistaxis**

Pulmonary Atresia with Patent Interauricular And Interventricular Septal Defects Causing Functional Cor Biloculare in a Patient with Dissociated Dextrocardia

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CONGENITAL LESIONS OF THE HEART are by no means rare. Such defects were noted in 1,171 of 40,130 cases in which autopsy was done at the Los Angeles County General Hospital between 1918 and 1948, an incidence of 2.9 per cent. The commonest malformation was patent foramen ovale, or interauricular septal defect, which was observed in 255 cases (0.5 per cent). Next were patent ductus arteriosus, noted in 135 cases (0.2 per cent), and interventricular septal defect in 126 cases (0.2 per cent). Congenital dextrocardia was observed in only four cases, and in three of them it was associated with general situs inversus.

In acquired dextrocardia there is no transposition of other organs; but in congenital dextrocardia the heart usually is dextroverted as though in mirror image and usually in the rest of the body also there is situs inversus—the stomach and spleen on the right side and the liver and appendix on the left. Rarely are other congenital defects of the heart associated with congenital dextrocardia when it is a part of generalized situs inversus. However, Kartagen-er's triad—sinusitis, bronchiectasis and dextrocardia—has been frequently reported. In the much rarer congenital dextrocardia without situs inversus of other organs, however, multiple and extensive congenital malformations of the heart are not uncommon. In the following case of congenital dextra-position of the heart there was extensive structural malformation.

REPORT OF A CASE

A 12-year-old Mexican girl was admitted in emergency to Olive View Sanatorium in November 1949 because of hemoptysis following what was described as severe upper respiratory tract infection with frequent cough and pain in the chest. In x-ray films

taken upon admittance the patient was observed to have far advanced bilateral pulmonary tuberculosis with a thin-walled cavity 2 cm. in diameter in the right mid-lung field. The sputum contained acid-fast bacilli.

A "blue baby" at birth, the patient had had increasing cyanosis and shortness of breath after only slight physical exertion. She was physically retarded (had not walked until four years of age) but mentally alert and seemed to have the intelligence normal for children of her age. She had had pertussis when two years of age and measles at ten years. There was no history of rheumatic stigmata or prolonged febrile disease. The patient had been observed periodically in the cardiac clinic of another hospital from January 1939 to July 1947 with diagnosis of congenital cardiac abnormality of cyanotic type, and there were no episodes of cardiac failure or thrombo-embolic phenomenon during that time. When three years of age she had repeatedly visited a patient with active tuberculosis, and it is believed that she had a previous primary tuberculous infection which caused enlarged mediastinal lymph nodes and an atelectatic left upper lobe.

Upon physical examination the patient was observed to be underdeveloped, poorly nourished and cyanotic. The body weight was 47 pounds. There was pronounced clubbing of the fingers and toes. The temperature was 102° F., the pulse rate 126, the blood pressure in the arms 110 mm. of mercury systolic and 70 mm. diastolic, and in the legs 130 mm. and 80 mm. respectively. The skin and mucous membranes of the head and neck and extremities were deep purple. There was slight distention of the veins in the neck. Symmetrical underdevelopment of the chest was noted and there was a slight bulging of the lower anterior portion of the chest. Except for an area of dullness posteriorly over the left upper lobe of the lungs, response to percussion over the lung fields was essentially normal. No rales were heard upon auscultation. Upon examination of the heart the point of maximum intensity was located in the fourth interspace to the right of the sternum and the area of retrocardiac dullness extended 4 cm. to the right and 2 cm. to the left of the sternum. There was a loud, rasping, grade IV systolic murmur heard best in the second interspace to the left of the

sternum, and it was accompanied by a systolic thrill. The murmur radiated down the left side of the sternum and upward toward the left clavicle, but was only faintly heard in the neck, axilla and back. P² was snapping. The liver, palpable three fingers' breadth below the left costal margin, was nontender. No masses or areas of tenderness were noted in palpation of the abdomen.

Erythrocytes numbered 7,190,000 per cu. mm. of blood and the hemoglobin value was 122 per cent. The sedimentation rate was only moderately accelerated. The patient had vital capacity of 900 cc.

Upon fluoroscopic examination the cardiac silhouette was observed to be predominantly in the right side of the chest, and active pulsations which seemed to come from an enlarged right ventricle were noted. Electrocardiographic tracings were consistent with dextroposition of the heart with right ventricular preponderance. Angiocardiographic observations and results of cardiac catheterization done

at the Los Angeles County General Hospital in December 1950 were consistent with truncus arteriosus (see Figures 1, 2, 3 and 4). Exploratory operation

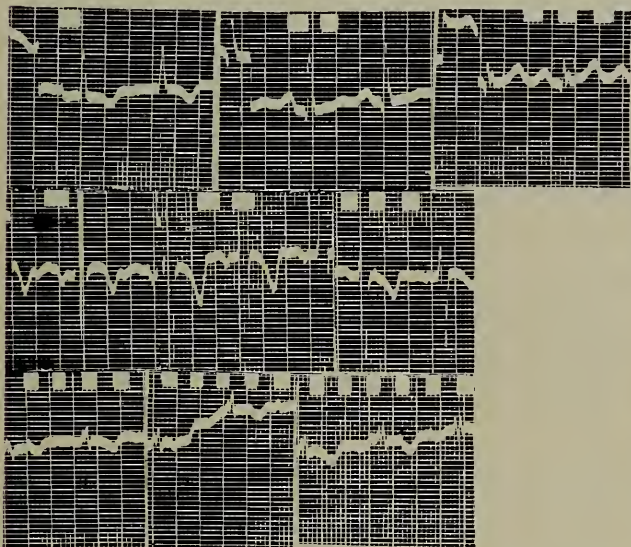


Figure 1.—Electrocardiographic abnormalities consistent with right heart preponderance and strain.

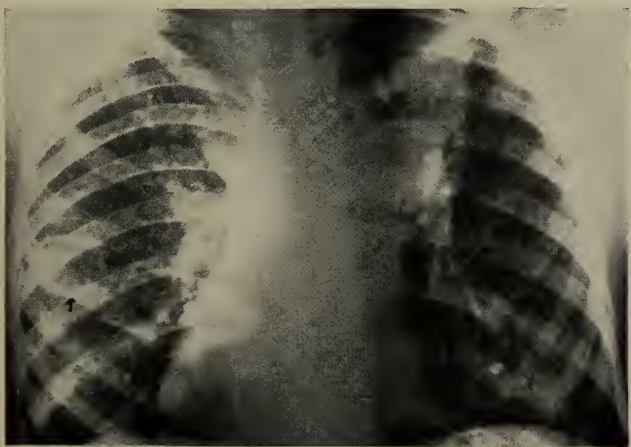


Figure 2.—X-ray of chest indicating dextroposition of the heart, thin-walled tuberculous cavity in right lung, and soft follicular type spread in both lung fields. The left upper lobe also has a fibrocalcific lesion with partial atelectasis.



Figure 3.—Angiocardiogram. Dye filling the right auricle and ventricle and remnants of the superior and inferior vena cava.



Figure 4.—Angiocardiogram. Residual dye in the right heart. The aorta can now be faintly visualized.



Figure 5—*Left*—Pathological specimen of heart, right oblique view. The right auricle and ventricle are reflected to show the openings of (A) the interauricular and (B) interventricular septal defects. The tricuspid valve is split in order to better visualize these openings. The thickness of the right ventricular musculature approximates that of the left ventricle. There was no pulmonary aorta and only a few shreds could be found at the site where the pulmonary aorta usually leaves the right ventricle. *Right*—In the left oblique view the septal defects are again visualized (A) interauricular and (B) interventricular. The systemic aorta is here reflected in order to demonstrate (C) the left carotid artery (D) right in nominate (F) left subclavian artery and (E) the patent ductus arteriosus.

was recommended at this time but was postponed owing to pulmonary hemorrhage with apparent miliary spread of tuberculosis.

Thereafter there was further increase in the tuberculous area in the lungs and frequent hemoptysis. Cyanosis was persistent but variable, becoming worse during coughing or crying spells. In July 1950, following miliary dissemination, the patient became critically ill and dihydrostreptomycin was given. There was good clinical response and in x-ray films considerable clearing in the areas of dissemination was noted. The cavity in the right mid-lung became larger, however, and because of the risk of further hemorrhages and pulmonary spread, pneumothorax on the right side was carried out. Some months later, two days after pneumothorax refill, massive pulmonary hemorrhage occurred and the patient died.

Postmortem examination. The body, about 50 inches long, weighed about 50 pounds. The skin and sclera were bluish, but there was only slight dependent lividity. The fingernails were curved and cyanotic. There was no edema.

The right pleural cavity, which contained about one liter of air, was traversed by numerous "string" adhesions. Diffuse fibrous adhesions that were difficult to separate held the left lung firmly to the wall

of the chest. The heart lay in the midline, extending more to the right than to the left. No lesions of the pericardium, epicardium, myocardium or endocardium were noted macroscopically, but there was extreme abnormality in the structure of the entire heart (Figure 5). The left ventricular muscle was as thick as the right; each was about 8 mm. thick. There were patent openings about 1 cm. in diameter through both the interauricular and the interventricular septa. Functionally the heart must have acted as a two-chamber heart. No opening from the heart to the pulmonary artery could be found, the only exit from the right ventricle being through the opening in the interventricular septum. The superior and inferior vena cava opened normally into the right auricle and the pulmonary veins into the left auricle. The aorta arose from the left ventricle in the normal position. Along its base arose several occluded shreds of an atretic vessel running to the pulmonary artery, but the supply of blood to the pulmonary artery came entirely from a large patent ductus arising in the ascending aorta just below the arch about 1 cm. from the left subclavian artery. The aorta and its major branches were large and thick, and there were a few atheromatous plaques near the aortic valve, but no other gross abnormalities were observed. The heart weighed 175 grams.

Both lungs were crepitant for the most part, but there was an area of consolidation around a cavity about 2 centimeters in diameter in the lower part of the upper right lobe. The cavity was thin-walled and completely filled with one clot of blood. There were also scattered clots in other parts of the lung, but no tuberculous lesions were seen except for the cavity on the right side. The right lung weighed 200 gm., the left 225 gm. The upper part of the left upper lobe showed atelectatic consolidation with fibrotic replacement of the parenchyma and dilation of the bronchi with multiple saccular cavities measuring 0.5 to 2 cm. in diameter. The cavities were completely filled with fresh clotted blood. The source of hemorrhage was not found, although the cavity and bronchial walls appeared hyperemic. There were scattered clots of blood in other parts of the left lung and some fresher tuberculous infiltration in the upper part of the left upper lobe. The liver, spleen, kidneys and alimentary tract were in normal position and no congenital abnormalities were observed in them.

The probable cause of death was hemorrhage from a bronchiectatic cavity in the left lung, possibly precipitated by increased intrapulmonary pressure secondary to pneumothorax and pulmonary hypertension owing to congenital malformation of the heart.

DISCUSSION

Reports of several somewhat similar cases^{2, 3, 4} have been published. In each case there was obvious clinical evidence of congenital cardiac defect—cyanosis from birth and clubbing of fingers. In those

cases, as in the one herein reported, enlargement of the heart to the right and palpable thrill were noted upon physical examination, and in most of them x-ray films showed right sided position of the heart and transverse enlargement. Electrocardiographic tracings showed right axis deviation and other abnormalities. Cardiac catheterization^{1, 5} and study of chemical factors in the blood were carried out only in one previous case. In that case x-ray films taken in rapid series after intravenous injection of Diodrast helped to reveal the true nature of the cardiac defect.

SUMMARY

In a case of pulmonary atresia with interauricular and interventricular septal defects with dissociated dextrocardia, clinical, electrocardiographic, roentgenographic and cardiac catheterization findings were correlated with the conditions observed at autopsy.

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Hexamethonium Contributing to Fatal Shock in Hypertensive Epistaxis

ARSENY K. HRENOFF, M.D., San Francisco

HEXAMETHONIUM, a powerful ganglionic blocking agent, is one of the new drugs that have appeared within the last few years for management of hypertension. According to Hilker and associates,² hexamethonium action is unpredictable and it causes wide variations in blood pressure when administered by parenteral route. Even oral administration is not completely safe. Toxic manifestations of hexamethonium are numerous—orthostatic hypotension, paralytic ileus, paralysis of the bladder, circulatory collapse, various gastrointestinal upsets, headache, visual disturbances, dyspnea and fatigue, among others.

Grimson and co-workers¹ treated 103 hypertensive patients with hexamethonium and observed three deaths from cardiovascular accident and uremia. These investigators emphasized both sympatholytic and parasympatholytic effects of this drug. Wilkins⁵

detected ischemic changes in an electrocardiogram following parenteral administration of 10 mg. of hexamethonium. Morrison³ described a case in which the patient died of coronary thrombosis and apparently death was precipitated by hexamethonium. Rytand⁴ said that hexamethonium is suitable for only a few patients, and that it fails in persons with renal insufficiency, who most need help.

The present report is of a patient with severe essential hypertension and intractable epistaxis who was treated by hexamethonium bromide parenterally in a last desperate measure to control the blood pressure. Overwhelming circulatory collapse occurred and eventually the patient died.

REPORT OF A CASE

A 61-year-old white man was admitted to hospital June 15, 1952, with a history of high blood pressure for many years. He fainted on the day of entry and was feeling weak and dizzy. On examination, the blood pressure was 230/140 mm. of mercury, the

pulse rate 74 and respirations 20 per minute. There was only moderate sclerosis of the radial arteries and the heart was slightly enlarged to the left of mid-clavicular line. A soft blowing systolic apical murmur was heard. There was slight edema at the ankles. Varicosities were prominent in both legs.

There was a trace of albumin in the urine. The hemoglobin content of the blood was 13.5 gm. per 100 cc. Erythrocytes numbered 4.3 million per cu. mm. and the leukocyte differential was within normal limits. Result of a serologic test for syphilis was negative. No enlargement of the heart was noted in x-ray films but there was pronounced tortuosity of the thoracic aorta. An electrocardiogram showed left ventricular hypertrophy with delayed AV conduction time.

Given sedatives, nicotinic acid and a low sodium diet, the patient did very well. He was discharged June 24 with blood pressure of 210/120 mm. of mercury but was readmitted the next day in a state of shock after severe bleeding from a nostril. The blood pressure then was 150/90 mm. and the pulse rate 100. Hemoglobin was 12.4 gm. per 100 cc. of blood.

From June 25 to July 10 the patient had four nasal hemorrhages, preceded each time by elevation of blood pressure and followed by marked hypertension. An otolaryngologist controlled the bleeding by nasal packs. Additional measures included three units of blood by transfusion (administered several days apart), Hykinone parenterally, Feosol by mouth, and liquid diet. The variations in blood pressure were striking—as high as 240/140 mm. and as low as 90/60. On June 30 the prothrombin time was normal. The hemoglobin content was only 7 grams per 100 cc. of blood and erythrocytes numbered 2,500,000 per cu. mm. Urinary output was good and the results of urinalysis were within normal limits. Upon fundoscopic examination, moderate narrowing of arteries and nicking of the veins was observed. On July 10 the blood pressure was 240/140 mm. The patient was very apprehensive and nasal oozing of blood began again. A cardiologist was consulted and administration of Bistrium (a hexamethonium bromide preparation containing 25 mg. of the drug per cubic centimeter) was begun. The following observations were made during the next six hours:

11:00 p.m.—0.2 cc. of Bistrium subcutaneously.

Midnight—Blood pressure 200/130 mm. of mercury.

2:00 a.m.—Blood pressure 180/120 mm.

4:00 a.m.—Blood pressure 170/118 mm.; patient perspiring profusely.

5:00 a.m.—0.2 cc. of Bistrium subcutaneously.

6:00 a.m.—Blood pressure 162/90; patient again perspiring.

6:30 a.m.—Pulse irregular and could not be counted. Blood pressure impossible to measure. Oxygen was administered. Patient died at 6:50 a.m., July 11, 1952.

Pathologist's report: "There was no clear-cut anatomical lesion which correlated with the terminal episode of shock. (The total blood volume, of course, may have been depressed and hence the patient's reserves may have been less than was apparent.) There was cerebral hemorrhage in the right occipital pole, but not of terminal origin and it was apparently asymptomatic. Slight adrenal changes were present also on this basis."

CONCLUSIONS

Hexamethonium bromide is dangerous especially when used parenterally, because of its rapid action. In the present case, it obviously contributed to the state of circulatory collapse which was primarily caused by severe epistaxis. It is felt that oral administration of this drug would have been safer.

6102 Geary Boulevard, San Francisco 21.

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EDITORIAL

Physicians and Schools

CALIFORNIA PHYSICIANS, educators and public health officials got together in Fresno late last month in the first of a scheduled series of Conferences of Physicians and Schools. Although this meeting was without precedent in California, it was declared a complete success by all parties represented.

The California conference was patterned after national meetings of the same type, four of which have been staged by the American Medical Association.

Sponsored by the California Medical Association and with the complete cooperation of the California State Department of Education and the California State Department of Public Health, the Fresno conference attracted some 250 participants. The CMA was officially represented by President Arlo A. Morrison, Secretary Albert C. Daniels and Rural Health Committee Chairman Henry A. Randel. Doctor Morrison addressed the gathering, Doctor Daniels presided and Doctor Randel headed up one of the study groups taking up special topics.

Out of the conference came a pleasing and somewhat surprising degree of unanimity of opinion regarding the problems and their solutions in areas of school health. Especially pleasing to the many physicians present was the agreement by all parties concerned on the importance of the family physician in dealing with the health problems, both individual and collective, of school children.

An idea of the scope of the conference may be gained from a listing of the special study groups into which the meeting was divided. Eight in number, these groups took up problems of communicable disease, health guidance and physical education, environmental aspects of school health, emotional problems of growing children, children with special health problems, the personal physician and

school health, school physicians and school health and emergency care.

These groups met separately, considered all angles of their particular problems and reported back their findings and recommendations in the final general session.

Among the recommendations presented, one of the main suggestions was the establishment of health councils, under county medical society sponsorship, to deal with school health matters on a local basis. Another proposal called for the periodic physical examination of teachers, including chest x-rays and basic laboratory procedures.

Adequate health examinations of school children on a periodic base were also recommended, such examinations to be made preferably by family physicians. Another suggestion was that greater emphasis be placed on health education and guidance in the elementary schools.

On the question of vaccinations for poliomyelitis, the conference committee recommended that a suitable vaccine, if developed, should be administered in a mass vaccination program and the program then turned over to local physicians for administration.

More training and information on first aid were also recommended, especially for teachers who may be confronted with problems of this type in the classroom.

Such a list of recommendations could be extended greatly but the foregoing represent some of the principal conclusions of the conference. From the physician's point of view, the important element in the conference findings is the intangible recognition of the part of the private, personal physician as the dominant health factor. Educators, public health officials and parent-teacher representatives all agreed that while health programs may be the responsibility of the community, medical care is solely the province of the practicing physician.

At the conclusion of the meeting there was general agreement that a similar conference be arranged two years hence, to check on developments in the interim, to restudy the same basic problems and to explore new items that may arise meanwhile.

What remains to be done now is to get into the hands of the responsible authorities a digest of the conference findings and to solicit the aid of all interested parties in carrying out the recommendations adopted. School principals, department of education officials, teachers, physical education instructors, hygiene teachers, athletic coaches and others in our school system must be brought into the picture. From the interest shown in Fresno by the educational groups, the cooperation of these individuals should be assured.

On the medical side, public health officers, county medical societies and private physicians must be alerted to the problems which may appear as individual cases but which apparently follow a pattern that is suitable for treatment on a program basis.

Parent-teacher organizations are another source of strength in meeting these problems common to school children. They must also be alerted and their help sought.

This program of education will necessarily be slow but if it is adequately carried out, it can have beneficial results for both the individual and group health of all students.

A start on this program will be made shortly in the compilation and distribution of a digest of the discussions and conclusions of this initial conference. This material will be supplied to county medical society bulletins, to educational publications, public health bulletins and others. A follow-up will be through school officials at state, county and local levels.

The county society and the individual physician have their part in this program. The conference found that school and other lay people should seek the advice and counsel of their local physicians and local medical societies in health matters and that, conversely, the physicians and their societies should assume their responsibilities as members of local health councils, school health conferences and similar groups.

As President Morrison so succinctly put it in his closing remarks, "the success of this state conference will attain its greatest value in the extent to which it is translated into action at the community level."

LETTERS to the Editor . . .

I WILL *never* give my doctor permission to place me in an iron lung. I would far rather die than risk being kept alive, a total and permanent invalid.

I reached this decision after surviving a severe attack of poliomyelitis in 1951 and experiencing for many bitter months the mental anguish of extreme shortness of breath and nearly useless arms. In the past three years I have discussed with many doctors the terrible dilemma created by the invention of the iron lung. The majority of my colleagues have stated that they too would hesitate to permit themselves to be placed in an iron lung.

Because this point of view has not been expressed publicly, because there is so much misconception about what an iron lung can and cannot do, and because the reasons for refusing iron lung treatment are so little known, I have been urged by many of my friends to write this communication.

My position in this matter is as follows: No patient should be placed in an iron lung without first having given his or her consent; and no person

should give his or her consent without considering the risks involved.

It is standard medical practice when an operation is advised for the doctor to explain to the patient the reasons for recommending it and to discuss *all* the pros and *cons* involved. The patient then decides whether or not he will accept the doctor's recommendation. Not until he gives his written permission is a patient operated on.

The decision to place a patient in an iron lung is frequently far more fateful than the decision to perform an operation. Few patients realize that when they permit themselves to be placed in an iron lung they may irrevocably condemn themselves to total and complete invalidism for the rest of their lives. At the same time they may warp the lives of the other members of their family and completely ruin themselves financially.

It is of greatest importance that everyone should consider the matter of treatment by the iron lung while he is well—when poliomyelitis can be con-

sidered as only a possibility—and can carefully weigh all the factors involved, for the mental and emotional confusion attending severe poliomyelitis makes judgment and decision difficult if postponed until the last minute.

The *reasons* for my decision never to allow myself to be placed in an iron lung (or rocking bed) are as follows:

1. Poliomyelitis patients who have only *partial paralysis* of their breathing muscles and who eventually (like myself) go on to make a *good* recovery will do so without the use of an iron lung.

2. Patients who remain for their whole lives, hopelessly crippled by *total* or *nearly total* paralysis of the breathing muscles and the muscles of their arms would have mercifully died in a few hours if they had not been placed in a lung.

3. The physician *must advise* the use of the iron lung when he sees that his patient is dangerously short of breath, but the patient *need not accept* this advice. He must remember that once he is placed in the lung, no one can remove him from it, even if every muscle in his body is totally and permanently paralyzed. Unless he recovers the ability to breathe by himself he is doomed to be kept alive indefinitely.

4. The number of patients being kept alive by iron lungs grows every day. There are now whole hospitals devoted to nothing but the care of these patients where more than 100 irons lungs operate day and night keeping alive people who can never regain their strength and vigor or self-sufficiency.

5. In addition to the patients kept alive inside iron lungs, there are thousands of others whose condition is nearly as pitiable. They are the patients whose lives have been saved by the iron lung and who regain just sufficient strength to breathe while lying quietly in bed but whose arms are so helpless that they cannot feed, clothe or cleanse themselves and who, even if their legs are strong enough to walk, are so short of breath with any activity that even six steps are more than they can manage.

Added to this, these patients frequently are unable to cough, sneeze, swallow, talk, urinate, have a natural bowel movement, or even sit themselves up.

All of these patients would have died if it were not for the iron lung which, although it saved their lives, cannot prevent the ultimate crushing of their spirit under the never-ending weight of their total helplessness.

6. It is important to understand the vast difference between paralyzed arms and paralyzed legs. Many persons, including the late Franklin Delano Roosevelt, have overcome the handicap of paralyzed legs, but the combination of paralyzed arms and breathing muscles is an insurmountable obstacle to any type of useful sustained activity on an independent basis.

7. Everyone should realize that in poliomyelitis the degree of paralysis and the amount of recovery are based entirely on how badly damaged are the nerve centers in the spinal cord. This damage is beyond human ability to alter in any way. All the physician and the patient can do is make the most of what remains when the attack is over. The iron lung cannot save or restore even a single nerve fiber that has been destroyed by the poliomyelitis virus.

8. Finally, in deciding whether or not to permit himself to be placed in an iron lung the patient must consider his family as well as himself.

This year, and every year until vaccination is successful in preventing poliomyelitis, there will be additional hundreds of iron lung and rocking bed patients. The only way to prevent these needless prolonged tragedies is for every person to consider very carefully, while he is well, whether he would permit himself or his child to be placed in an iron lung. As far as I am concerned, I would rather put my faith in Providence than in a man-made machine which has caused much more suffering than it has relieved.

LOUIS SHATTUCK BAER, M.D.

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California MEDICAL ASSOCIATION

NOTICES & REPORTS

The Treatment of Cancer with Arginase (Hepasyn)

A Supplemental Report by the Cancer Commission of the California Medical Association

IN THE ORIGINAL REPORT by the Cancer Commission of the California Medical Association, "The Treatment of Cancer with Arginase" (CALIFORNIA MEDICINE, 79:248-255, Sept. 1953), the following conclusions were arrived at after careful consideration by the Commission:

"Arginase (also termed hepasyn) has been advocated for the treatment of cancer. The current proponents have claimed 'near miraculous results.'

"The Cancer Commission has collected information on more than 26 patients treated with arginase, at least six of whom are now dead with the disease. Of those alive, no patient has been found with objective evidence of control of cancer under the treatment with arginase or hepasyn alone.

"The hospital in which the treatments were given in 1951 and 1952 lists 120 patients as having received arginase; by May of 1953, 70 of these patients were known to be dead with cancer.

"Autopsy studies disclosed no evidence of specific chemotherapeutic effect.

"There is no evidence to date that arginase (or hepasyn) has a beneficial effect on patients with cancer."

The Cancer Commission has continued its investigation of arginase including some further follow-up of the patients treated with this agent and described in the report of September 1953. No further information has been secured in this follow-up to indicate any objective evidence of effectiveness for the treatment of cancer with arginase alone. In the interval since the Commission's report on arginase some noteworthy developments have engaged the attention of the Commission, and are the subject of this supplementary report.

Experimental use of arginase at Sloan-Kettering Institute. Recently the completed report of the study made at Sloan-Kettering Institute for Cancer Research (Memorial Center for Cancer, New York City) on arginase was made available to the Commission. This report is entitled "Report of a Limited Study of Hepasyn Tested Against the BA Mammary Adenocarcinoma in C₃H Mice," by C. Chester Stock and George Tarnowski.

The stated object of this study is recorded as: "To test in parallel experiments with Dr. W. G. Irons his preparation of arginase against a mammary adenocarcinoma under conditions mutually agreed upon either initially or in the course of the experiments."

In the introductory remarks of the report the following statement appears:

"... In view of the earlier interest of one of us in arginase, we believed it desirable to conduct experiments with a preparation of arginase and with experimental conditions considered by Dr. Irons as most likely to show an activity, namely arginase prepared by him and used under his supervision in our laboratories...."

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Again quoting from this report: "The following comments may be made concerning the tumors:

"1. There were 100 per cent takes although in a few instances tumor grew slowly initially and at three weeks were 1 to 1.5 cm. rather than 2 cm. in average diameter.

"2. There were no spontaneous regressions.

"3. There were no complete tumor regressions in the treated animals and no significant retardations of growth rate of the tumors.

"4. At autopsies the tumors in the hepasyn-treated tumors were not found to be of firmer consistency than the untreated tumors. No grossly or microscopically visible calcification was seen in any of the tumors. There appeared to be no significant difference in ease of separation of the tumors from the surrounding tissue, whether treated or not."

The authors made the following conclusions: "Under the conditions of the experiment there was no significant effect upon the tumors as judged by tumor size or histological observation."

Correspondence concerning the nature of arginase. Inasmuch as the sponsors of arginase have informed the Cancer Commission of the California Medical Association that the preparation which the group was using was not pure arginase, and as the Commission was in possession of entirely sound evidence, some of which has been published, that arginase was ineffective against experimental cancer, the Commission could only assume that the preparation being used was arginase plus some other substance or substances and the preparation referred to as hepasyn was therefore characterized by the Commission as a secret remedy. On May 5, 1954, in a letter addressed to the Secretary of the Los Angeles County Medical Association, Mr. Henry Gifford Hardy of San Francisco, attorney for E. Forrest Boyd, M.D., and Leo W. Hosford, operator of a mortuary college in San Francisco, made the following statement:

"At the request of E. Forrest Boyd, M.D., I wish to advise you of the nature and contents of the product hepasyn which is being used in his research program. Hepasyn is an enzyme-like product derived from fresh beef livers with thermometallic activation, as exemplified by Junowicz-Kocholaty, R., and Kocholaty, W., *Science*, 94:144 (1941), and Mohamed, M. S., and Greenberg, D. M., *Arch. Biochem.*, 8:349 (1945). It is used to perform its expected physiological function upon intravenous injection, of reducing its substrate arginine to urea and ornithine.

"Yours very truly,

"(Signed) Henry Gifford Hardy."

This letter was forwarded to the Cancer Commission and it was submitted in turn to David M. Green-

berg, professor and chairman of the Department of Physiological Chemistry at the University of California in Berkeley, whose report on arginase and tumor growth will be referred to below. Dr. Greenberg replied that the statements supplied in Mr. Henry G. Hardy's letter would lead to the interpretation that the active substance supposed to be in hepasyn is the enzyme arginase and nothing else. Dr. Greenberg further stated that the material used by Dr. E. Forrest Boyd is, as far as Dr. Greenberg learned, a crude liver preparation and undoubtedly contains numerous other substances than arginase. Neither pure arginase nor any other material found in liver, however, has been proved to be effective against experimental cancers or against human cancers.

At any rate, after maintaining that the product in use was not pure arginase, the attorney for Boyd and Hosford has submitted a statement which in effect maintains that it is pure arginase, which in turn is proved to be ineffective against cancer.

*Additional experimental evidence as to "The Lack of Effect of High Potency Arginase on Tumor Growth."** Immediately following the Commission's report there appeared in the October 1953 issue of *Cancer Research* a paper by David M. Greenberg and E. N. Sassenrath under the quoted title appearing at the heading of this paragraph. Some of the material used in this study was prepared by the method of Vrat and was actually obtained from the laboratory in which Vrat previously worked. The conclusions of this study were that, contrary to previously published results, no statistically significant differences were found in the arginase activities of blood plasma, muscle or liver between control and tumor-bearing mice. The report also concluded that no persistent carcinostatic effect was obtained on a spectrum of tumors by the continued injection of daily doses of a large number of arginase units.

Summary. Further investigation of treatment of cancer with arginase by the Cancer Commission has failed to produce any information indicating effective control of the disease in patients previously reported.

A study done at Sloan-Kettering Institute for Cancer Research, in which material provided by W. G. Irons, D.D.S., and the group sponsoring arginase treatment, was used on experimental cancer, and in which Irons himself and one of the investigators at Sloan-Kettering Institute each conducted a parallel series of investigations on tumor-bearing animals, was reported by Sloan-Kettering Institute as showing no significant retardation of growth rates and no gross or microscopic changes in autopsied animals.

**Cancer Research*, XIII, 10:709-15, October 1953.

The group sponsoring arginase has submitted a statement as to the nature of the product, which would indicate that pure arginase is the supposedly active ingredient.

A publication by Greenberg and Sassenrath is summarized, with the conclusion that there was no carcinostatic action from the use of pure arginase, or from arginase obtained from the laboratory in which the agent was originally tested in experimental neoplasms (Vrat).

James Frank Doughty, M.D.

THE LITTLE DYNAMO is gone. Frank Doughty, of Tracy, long a familiar figure in California medicine's scene, died October 19, of coronary artery disease, in the Tracy Memorial Hospital. This is the same hospital that Frank's apparently inexhaustible energy helped so greatly to conceive and construct. This is the same Tracy that accorded to its Dr. Doughty a degree of grateful love seen insufficiently today. This was the same Frank Doughty whose improvident expenditure of that energy made Tracy aware of all that the highest type of family doctor can mean to his community.

One soon lost awareness of his very small stature and became impressed, instead, with his abounding good humor, his drive and his knack for accomplishment. People genuinely liked him, and often succumbed to his will through real fondness for his persuasion, but never in resentful acquiescence.

He was born in Wellington, Kansas, April 26, 1898, received his A.B. at Southwestern College in 1919 and his M.D. at Northwestern in 1923. After intern and residency services, he entered into private general practice in Tracy, where he lived until his death.

Frank was for many years a delegate from San Joaquin County to the annual CMA meetings, and from 1953 until he died was an alternate delegate to the American Medical Association. He served on the Rural Health Council of the American Medical Association. He was a member of the California Physicians' Service Board of Trustees from May 7, 1945, to May 15, 1951, and its president from 1950 to 1951.

Busy as he always was, he never refused a task. His cheerfulness in all his duties was outstanding.

He is survived by his widow, Margaret, and his twin children, Roberta and Robert.

His broad bushy mustache will be missed. It would have weighed down a lesser man.

FRANCIS T. HODGES, M.D.

In Memoriam

BROWNING, CLYDE F. Died in Los Angeles, October 27, 1954, aged 52. Graduate of Washington University School of Medicine, St. Louis, Missouri, 1929. Licensed in California in 1930. Doctor Browning was a member of the Los Angeles County Medical Association.



BRUCE, ROBERT A. Died in Pasadena, October 12, 1954, aged 39. Graduate of the University of California Medical School, Berkeley-San Francisco, 1940. Licensed in California in 1940. Doctor Bruce was a member of the Los Angeles County Medical Association.



CHAVANNES, VIRGINIA C. Died in Los Angeles, October 27, 1954, aged 45. Graduate of the University of Tennessee College of Medicine, Memphis, Tennessee, 1931. Licensed in California in 1933. Doctor Chavannes was a member of the Los Angeles County Medical Association.



COHN, JULIAN. Died in West Los Angeles, November 9, 1954, aged 62, of coronary artery disease. Graduate of the University of Texas School of Medicine, Galveston, 1924. Licensed in California in 1924. Doctor Cohn was a member of the Los Angeles County Medical Association.



DOUGHTY, J. FRANK. Died in Tracy, October 19, 1954, aged 56, of coronary artery disease. Graduate of Northwestern University Medical School, Chicago, Illinois, 1923. Licensed in California in 1923. Doctor Doughty was a member of the San Joaquin County Medical Society.



EARLY, CLYDE E. Died in Los Angeles, October 14, 1954, aged 70. Graduate of Indiana University School of Medicine, Bloomington-Indianapolis, 1911. Licensed in California in 1917. Doctor Early was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an associate member of the American Medical Association.



GOECKERMAN, WILLIAM H. Died in Whittier, November 9, 1954, aged 70. Graduate of the Wisconsin College of Physicians and Surgeons, Milwaukee, 1906. Licensed in California in 1932. Doctor Goeckerman was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an associate member of the American Medical Association.



JEANCON, ETTA C. Died in Los Angeles, October 30, 1954, aged 72, of carcinoma. Graduate of the Eclectic Medical College, Cincinnati, Ohio, 1905. Licensed in California in 1912. Doctor Jeancon was a member of the Los Angeles County Medical Association.



LEACH, PAUL H. Died in Los Angeles, September 28, 1954, aged 50. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1931. Licensed in California in 1931. Doctor Leach was a member of the Los Angeles County Medical Association.

LEAVITT, FRANK J. Died in Glendale, September 27, 1954, aged 80. Graduate of the University of Illinois College of Medicine, Chicago, 1902. Licensed in California in 1911. Doctor Leavitt was a member of the Los Angeles County Medical Association, a life member of the California Medical Association, and an associate member of the American Medical Association.



LIPPMANN, CARO W. Died in Berkeley, November 14, 1954, aged 68. Graduate of Harvard Medical School, Boston, Massachusetts, 1910. Licensed in California in 1912. Doctor Lippmann was a member of the San Francisco Medical Society.



MATSON, JAMES R. Died in San Diego, September 29, 1954, aged 46. Graduate of Ohio State University College of Medicine, Columbus, 1933. Licensed in California in 1934. Doctor Matson was a member of the San Diego County Medical Society.



MOLITOR, NICHOLAS. Died in San Diego, October 27, 1954, aged 84. Graduate of Rush Medical College, Chicago, Illinois, 1891. Licensed in California in 1894. Doctor Matson

was a retired member of the San Diego County Medical Society, the California Medical Association, and an associate member of the American Medical Association.



PARROTT, JAMES C. Died in San Francisco, November 9, 1954, aged 62. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1920. Licensed in California in 1920. Doctor Parrott was a member of the San Francisco Medical Society.



RYAN, AMBROSE J. Died in San Francisco, November 6, 1954, aged 52. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1931. Licensed in California in 1931. Doctor Ryan was a member of the Solano County Medical Society.



SMITH, R. NICOL. Died in Hollywood, October 20, 1954, aged 78. Graduate of Northwestern University Medical School, Chicago, Illinois, 1903. Licensed in California in 1905. Doctor Smith was a member of the Los Angeles County Medical Association.

ATTENTION—ALL MEMBERS

CALIFORNIA MEDICAL ASSOCIATION

AT THE coming annual meeting of the California Medical Association, to be held May 1-4, 1955, in San Francisco, approximately 100 motion pictures on surgery and medicine will be screened on the program of the Motion Pictures Division.

The educational and scientific value of motion pictures has been proved by the large attendance at the Motion Picture Section during our previous meetings.

If you would like to present a motion picture film on this program, it is imperative that you submit your application before January 10, 1955.

Address all communications to:

ARTHUR E. SMITH, M.D., D.D.S.
Chairman, Motion Pictures Division
California Medical Association
1930 Wilshire Boulevard, Suite 511
Los Angeles 57, California



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

NATIONAL AUXILIARY PRESIDENT VISITED EUROPE

Our national president, Mrs. George Turner of El Paso, Texas, was privileged to be one of the representatives from national organizations invited to make an inspection tour of Radio Free Europe in October. The group, sponsored by the American Heritage Foundation, left New York by air on October 20 and returned on the 29th. They visited Munich, Berlin and Paris and took a U. S. Army bus tour through Germany and the Russian sector.

* * *

CALIFORNIA WINS PRAISE FROM AMEF

Physicians and their wives will be interested in going back to the September issue of the Auxiliary magazine *Courier* and rereading the excellent article on page 11 concerning the American Medical Education Foundation. When Mr. Hiram Jones, executive secretary of the AMEF, read it, he was so impressed that he wrote for permission to have reprints made and distributed throughout the nation. The author is Mrs. Charles J. Hart of Walnut Creek, State Chairman of AMEF.

* * *

AUXILIARIES SPONSOR CHRISTMAS PROJECTS

Along with our year-around projects of nurse recruitment, health education and community service, our county Auxiliaries sponsor special projects at Christmas time.

In San Joaquin County, for instance, the members have an annual shower of gifts for the boys at the Fricot Ranch School. They also started a library at the Bret Harte Sanitarium, and new books are added each year at Christmas time.

Santa Cruz members annually wrap hundreds of Christmas gifts for patients at their county hospital. Santa Clara also sponsors parties with gaily wrapped gifts for the children in the pediatric wards of the county hospital.

The Fresno Auxiliary gives a party for the nurses at the county hospital and gives them a nice gift each year. Last year it was a television set for the Nurses' Home.

Humboldt County wrapped useful kitchen utensils, towels, pot holders, etc., to include in the Christmas baskets distributed by the county welfare department.

The Shasta County Auxiliary supplied and decorated trees for both of the hospitals in that county. They also help the Tuberculosis Association in checking Christmas Seal records.

In Santa Barbara County, members supply gifts for the needy aged and for small children, to be distributed by the Council of Christmas Cheer. Sonoma County members provide gifts for children in foster homes.

We have already told you about the Christmas festivities sponsored by the San Francisco group, at the Laguna Honda Home for the aged. The Los Angeles Auxiliary has become famous for the workshops which annually turn out thousands of gifts for needy persons both young and old.

In future issues we'll tell you more about the projects carried on throughout the state by our members, to bring happiness to shut-ins, orphans, the needy and the handicapped.

* * *

TODAY'S HEALTH SETS NEW RECORD

With the October issue, *Today's Health* reached a circulation of over 340,000 copies, the highest in its 31-year history. The American Medical Association gratefully acknowledges the important part played by the Auxiliaries which devote much time and energy to promoting subscriptions among their own members as well as among the physicians, dentists and allied professions.

Today's Health is now found in the reception rooms of more than 103,000 physicians and 45,000 dentists in the United States.

San Mateo County gave four gift subscriptions to *Today's Health* in lieu of the customary corsage for the State President when she visited them. We are trying to encourage all of our counties to adopt this custom.

* * *

DOES YOUR COUNTY HAVE AN AUXILIARY?

If your county does not have an Auxiliary, we urge you to enroll your wife as a member-at-large in the Auxiliary. For only two dollars a year she can enjoy all the privileges of membership, including a subscription to *Courier*. Our members-at-large are very important, because they are the ones who help organize new auxiliaries when the right time comes.

MRS. FREDERICK J. MILLER, *President*

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Ernest O. Lawrence, director of the University of California Radiation Laboratory, has been awarded the 1954 Medal of the American Cancer Society for "distinguished contribution to cancer control." Dr. Lawrence, the first Californian to receive the society's annual national award, was cited for opening new fields of cancer research through development of the cyclotron.

* * *

A six-day **postgraduate assembly** oriented about clinical physiology and designed for practicing physicians will be held January 31-February 5 under the auspices of the Committee for Postgraduate Education of the Alameda-Contra Costa Medical Association and the **Institute for Metabolic Research** of Highland Alameda County Hospital.

The meetings will be held at Highland Hospital and one day each will be given to the following subjects: Clinical Physiology of the Liver; Clinical Physiology of the Kidney; Acid-Base Fluid and Electrolyte Metabolism; Protein Metabolism; and Fat Metabolism. Saturday, February 5, will be given over to a general metabolic clinic with presentation of a variety of cases.

Among **guest speakers** will be Dr. Robert Berliner of the National Institute of Health, Bethesda, Maryland; Dr. Sidney Madden, professor of pathology, University of California at Los Angeles; Dr. Helen Martin, associate professor of medicine, University of Southern California; Dr. Irvine McQuarrie, professor of pediatrics, University of Minnesota; and Dr. Frank Engel of Duke University of Medicine.

Enrollment in the course is limited to 100 students. The fee is \$100.

FRESNO

Dr. Henry A. Randel, Fresno, and **Dr. Robb Smith**, Orange Cove, were speakers during the recent convention of the California Farm Bureau Federation in Long Beach. Dr. Randel, who is chairman of the California Medical Association Committee on Rural Health, reported on "Activities of the State Rural Health Council" and Dr. Smith discussed "Rural Health and the General Practitioner."

LOS ANGELES

The **Research Study Club** of Los Angeles will hold its 24th Annual Mid-Winter Clinical Convention in Ophthalmology and Otolaryngology January 17-28, 1955. Session on otolaryngology will be held from Monday through Saturday, January 17-22; and the ophthalmology meetings will take place Monday through Friday, January 24-28.

* * *

Lectures, panel discussions and luncheon panel meetings, along with refresher courses, scientific and technical exhibits, and women's activities, will be featured at the 1955

College of Medical Evangelists School of Medicine **Alumni Postgraduate Convention** to be held in Los Angeles February 15-17, according to announcement from Dr. William Quinn, general chairman of the convention's governing board. The convention is open to all physicians regardless of their school affiliation. Requests for information should be addressed to the managing director, Walter B. Crawford, at 316 North Bailey Street, Los Angeles 33.

* * *

Dr. G. T. Anderson, president of La Sierra College, Riverside, became the ninth president of the **College of Medical Evangelists**, located on campuses at Loma Linda and Los Angeles. Dr. W. E. Macpherson, president of CME in recent years, was appointed to the deanship of the School of Medicine which was left vacant with Dr. Harold Shryock's resignation last August. Dr. Keld J. Reynolds, associate secretary of the Seventh-day Adventist world department of education, became Dean of the Faculties.

MENDOCINO-LAKE

The Mendocino-Lake County Medical Society held its **first annual press-radio dinner** recently in Ukiah. Members of the working press were guests of the Society. The occasion afforded both the profession and the press an opportunity to get better acquainted and to discuss mutual obligations in the reporting of accident cases and news affecting physicians.

Dr. Olga A. Miller, president of the Society, presided at the meeting, which was arranged by Drs. James Massengill, Daniel Lieberman and J. E. Gardner.

MONTEREY

The Monterey County Medical Society, in cooperation with KWSB-TV (Salinas-Monterey), is sponsoring a series of 15-minute, public service programs on alternate Tuesdays. Entitled, "**Spotlight on Medicine**," the show presents a panel of local physicians to answer questions on such subjects as ulcers, arthritis, blurred vision and obesity. Production advice and aids are supplied by the CMA's Public Relations Department. Television chairman, Dr. Howard Miles, Salinas, coordinates the entire show, which features many visual aids. Neil Edmondson, program director for the station, is the moderator.

SAN FRANCISCO

Officers elected by the **San Francisco Dermatological Society** for 1954-55 are: Dr. Max E. Krause, Oakland, president; Dr. Edward J. Ringrose, Berkeley, vice-president; Dr. R. Raymond Allington, Oakland, secretary; and Dr. George T. Lenahan, San Francisco, editor.

GENERAL

The new, 19th Edition of the **American Medical Directory** is now in galley form and is expected to be ready for delivery about the middle of 1955, according to recent announcement from the American Medical Association. The previous edition was issued in 1950. "Within the next few weeks," the announcement said, "a directory information card will have been mailed to every physician in the United States, its dependencies, and Canada, requesting information to be used in compiling the new Directory." It was urged that "physicians receiving an information card should fill it out and return it promptly regardless of whether any change has occurred in any of the points on which information is requested."

"Physicians also should fill out the right half of the card, which requests information to be used exclusively for statistical purposes," the announcement said. "Even if a physician has sent in similar information recently, he should mail the card promptly to the Directory Department of the American Medical Association to insure an accurate listing of his name and address. There is no charge for publishing the data, nor are physicians obligated in any way."

* * *

The 1955 annual essay contest of the Mississippi Valley Medical Society was announced recently. The Society will offer a cash prize of \$100, a gold medal, and a certificate of award for the best unpublished essay on any subject of a general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificate of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents and citizens of the United States. The winner will be invited to present his contribution before the 20th Annual Meeting of the Mississippi Valley Medical Society to be held at the Jefferson Hotel, St. Louis, Missouri, September 28, 29, and 30, 1955. Further details may be secured from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209-224 W.C.U. Building, Quincy, Illinois.

* * *

The Internal Academy of Proctology has announced its annual cash prize and certificate of merit award contest for 1954-55. The best unpublished contribution on proctology or allied subjects will be awarded \$100 and a certificate of merit. Physicians in all countries, whether or not affiliated with the International Academy of Proctology, are eligible. The formal award of the first prize and the presentation of other certificates will be made at the annual convention dinner of the academy, March 26, 1955, at the Plaza Hotel, New York City. The deadline for manuscripts is February 1, 1955. Further information may be obtained from the organization's office, 147-41 Sanford Avenue, Flushing, New York.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

In Long Beach:

Office Gynecology—January 6, 13, 20, 1954.

Contact: Mrs. Margaret H. Griffith, Assistant Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

In San Francisco:

Electrocardiography for Beginners—January 31 to February 4.

Advanced Electrocardiography—January 31 to February 4.

Therapy of Cardiovascular Diseases—January 31 to February 4.

Atomic Energy Medicine—February 24 to February 27.

Course for General Practitioners—March 7 to March 11.

Symposia on Psychosomatic Medicine—March 23, 30, and April 6.

Recent Advances in Internal Medicine—April 18 to April 22.

Pediatric Conference—September (dates to be announced later).

Conference on Applied Therapeutics—October 17 to October 19.

Conference on Gynecology and Obstetrics—October 20 and October 21.

Ophthalmological Conference—December 5 to December 9.

In East Oakland:

Medicine for General Practitioners—Tuesday evenings, September 20 to December 6.

In Berkeley:

Postgraduate Conference—Wednesday evenings, September to December (dates to be announced later).

In San Mateo:

Evening Lectures in Medicine—Thursday evenings, September 22 to December 15.

Contact: Office of Medical Extension, University of California Medical Center, San Francisco 22.

STANFORD UNIVERSITY SCHOOL OF MEDICINE, SAN FRANCISCO

Spring Conference in Ophthalmology—March 21 through March 25.

Contact: Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15.

CHILDREN'S HOSPITAL SEMINARS

The Management of Metabolic Disturbances Commonly Encountered in Practice—January 22, 1955.

The Allergic Dilemma—February 26, 1955.

Infections and Their Management—March 26, 1955

Accreditation by the Board of General Practice has been granted. Gertrude F. Jones, M.D., Chairman, Medical Alumni Committee, Children's Hospital, 3700 California Street, San Francisco 18.

CALIFORNIA MEDICAL ASSOCIATION, POSTGRADUATE ACTIVITIES INSTITUTES

SOUTHERN COUNTIES—Arrowhead Springs—January 27-28, 1955.

NORTH COAST COUNTIES—Santa Rosa—February 3-4, 1955.

WEST COAST COUNTIES—Santa Barbara—February 17-18, 1955.

SAN JOAQUIN VALLEY COUNTIES—Yosemite—April 13, 14, 15, 1955.

SACRAMENTO VALLEY COUNTIES—Cal-Neva—June 16-17, 1955.

Contact: C. A. Broadbuss, M.D., Director of Postgraduate Activities, P.O. Box AI, Carmel, California.

Medical Dates Bulletin

THIS BULLETIN of the dates of postgraduate education assemblies and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: C. A. Broaddus, M.D., P.O. Box AI, Carmel, California.

JANUARY MEETINGS

January 17-28—RESEARCH STUDY CLUB OF LOS ANGELES: Twenty-fourth Annual Midwinter Clinical Convention in Ophthalmology and Otolaryngology. Mr. H. M. Nickerson, manager of the Elks Club, 607 South Parkview Street, Los Angeles 57.

January 21-22—AMERICAN COLLEGE OF SURGEONS: Palm Springs.

January 22—CHILDREN'S HOSPITAL SEMINAR: The Management of Metabolic Disturbances Commonly Encountered in Practice. Gertrude F. Jones, M.D., Chairman, Medical Alumni Committee, Children's Hospital, 3700 Sacramento Street, San Francisco 18. Accreditation by the Board of General Practice has been granted.

January 26-28—AMERICAN BOARD OF ORTHOPEDIC SURGERY: Part II, Oral and Written, Examination, Los An-

geles. Final date for filing application for Part II was August 15, 1954. Dr. Harold A. Scofield, 122 S. Michigan Avenue, Chicago, Ill.

FEBRUARY MEETINGS

February 26—CHILDREN'S HOSPITAL SEMINAR: The Allergic Dilemma. Gertrude F. Jones, M.D., chairman, Medical Alumni Committee, Children's Hospital, 3700 Sacramento Street, San Francisco 18. Accreditation by the Board of General Practice has been granted.

MARCH MEETINGS

March 26—CHILDREN'S HOSPITAL SEMINAR: Infections and Their Management. Gertrude F. Jones, M.D., chairman, Medical Alumni Committee, Children's Hospital, 3700 Sacramento Street, San Francisco 18. Accreditation by the Board of General Practice has been granted.

* * *

CALIFORNIA MEDICAL ASSOCIATION: Annual Session, May 1-4, 1955, San Francisco.

AMERICAN MEDICAL ASSOCIATION: Annual Session, 1955, Atlantic City, June 6-10; Clinical Session, 1955, Boston, November 29-December 2.

CALIFORNIA SOCIETY OF INTERNAL MEDICINE: October 1, 1955, Biltmore Hotel, Santa Barbara, Mildred D. Coleman, Assistant Secretary, 384 Post Street, San Francisco 8.

ATTENTION—ALL MEMBERS

CALIFORNIA MEDICAL ASSOCIATION

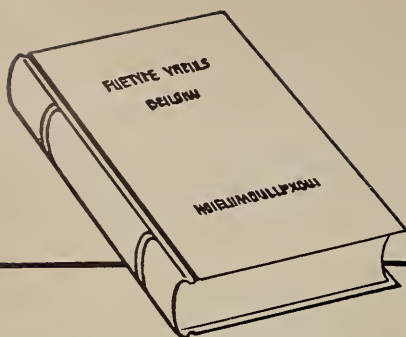
AT THE coming annual meeting of the California Medical Association, to be held May 1-4, 1955, in San Francisco, approximately 100 motion pictures on surgery and medicine will be screened on the program of the Motion Pictures Division.

The educational and scientific value of motion pictures has been proved by the large attendance at the Motion Picture Section during our previous meetings.

If you would like to present a motion picture film on this program, it is imperative that you submit your application before January 10, 1955.

Address all communications to:

ARTHUR E. SMITH, M.D., D.D.S.
Chairman, Motion Pictures Division
California Medical Association
1930 Wilshire Boulevard, Suite 511
Los Angeles 57, California



THE PHYSICIAN'S *Bookshelf*

MANUAL OF UROLOGY. Alec W. Badenoch, M.A., M.D., Ch.M.(Aberd.), F.R.C.S. Grune & Stratton, New York, 1954. 555 pages, \$15.75.

The author of this recently published volume of some 555 pages is surgeon to St. Peter's Hospital for Stone in London. The book is intended primarily as a guide and reference book for students and especially for general surgeons interested in urology. It is really somewhat more than a manual, and appears to be an excellent basic textbook and introduction to the specialty. It is in many respects not sufficiently detailed to meet the needs of the man whose sole or primary interest is in the field of genitourinary disease. This is particularly true of the descriptions of technical procedures.

The book is complete in the sense that there is at least some mention of practically all the pathological conditions found in the urinary tract, though many of them of necessity receive only slight notice. Preliminary chapters on the anatomy and physiology of the urinary system are good. As might be expected from the author's background, the discussion of calculous disease is very excellent. Incidentally he does not even suggest the use of hyaluronidase for the prevention of recurrent calculi. There is a fine description of bilharzia infestation of the bladder, and the chapter on tuberculosis is a valuable outline of modern opinion. He might have given more attention to the medical treatment of the disease.

In common with many English texts, the book is well written and organized, and it is easily read and understood. Naturally the English nomenclature is used, and the American reader may find unfamiliar names applied to some drugs, instruments and even operative procedures. What we have known for a generation as Randall stone forceps are called Bernard Ward lithotomy forceps. Other instances might be cited. There are many very excellent illustrations, some in color, and all well reproduced. The x-rays are good also, though many of them have been printed from the negatives without reversal, a technical point which hardly detracts from their value.

The tone of the work is conservative, and one gathers the impression that though it is an excellent foundation for further study it is possibly not quite abreast of urological progress of the last few years. Sulfathiazole and sulfacetamide are designated as the sulfonamides of choice, and the more recent derivatives of that group are not even mentioned. Penicillin and streptomycin are recommended, but only scant attention is given to the more recent antibiotics of the tetracyclin group. Transurethral resection of the prostate is considered to be of limited suitability, a feeling that is probably shared by many urologists, but will be vigorously contested by its most ardent advocates. Some of the more recent diagnostic procedures, such as aortography, perirenal insufflation, and perineal prostatic needle biopsy, are given little or no notice.

For the man for whom the book is intended, the physician interested in urology but not limited to that field, or for the student or general practitioner who wants a relatively simple fundamental knowledge of the subject, with some idea of the problems involved and the various methods of treatment, Badenoch's "Manual of Urology" will be a valuable addition to his library.

* * *

PHARMACOLOGIC PRINCIPLES OF MEDICAL PRACTICE, THE—3rd ed.—A textbook on Pharmacology and Therapeutics for Medical Students, Physicians, and the Members of the Professions Allied to Medicine. John C. Krantz, Jr., Professor of Pharmacology, School of Medicine, University of Maryland; and C. Jelleff Carr, Professor of Pharmacology, School of Medicine, University of Maryland. The Williams and Wilkins Company, Baltimore. 1954. 1183 pages, \$12.00.

The authors and publishers have cooperated in producing a marked improvement in this popular textbook, adding new material concerning both old and new drugs, revising theory and greatly improving the appearance by the use of new type. Because of the entire resetting of the type, the author had freedom in rewriting many portions of the book, to produce this excellent third edition. New items of interest to the reviewer were a more modern discussion of cellular actions of drugs, and general theory of drug action, improvements in charts, tables and graphs where new discoveries required, such as the graph of blood levels of penicillin, tables of organisms susceptible to various antibiotics, revisions on history of pharmacology, such as giving credit to Lundy for clinical introduction of thiopental in 1934 and the synthesis of morphine by Gattes and Tscudi in 1952. Photographs of Carl Koller, Otto Loewi and Philip S. Hench appear for the first time; the rather unnatural photograph of Sir Frederick G. Banting which appeared in the first two editions has been replaced by a somewhat imaginative and impressionistic portrait of Banting and Best making blood sugar determinations on a dog in their little laboratory on August 14, 1921; and a more modern photograph of E. C. Kendall has replaced the portrait done in his younger years. There is important new material on dihydrostreptomycin, motion sickness drugs, adrenergic and cholinergic blocking agents, drugs for myasthenia gravis, hemostatics, drugs for leukemia and cancer, the new carbonic anhydrase inhibiting diuretic, acetazoleamide or Diamox, and cortisone, hydrocortisone and corticotropin (ACTH). A list of the 62 tables and another of the 83 figures and 4 plates is a distinct aid to the teacher.

The general appearance of the text material has been definitely improved by the new chapter headings and type. And by reducing the subject matter on topics of decreasing interest, such as the sulfonamides, it has been possible to add new material without enlarging the book. From the reviewer's point of view, the book could have been further improved by placing most of the general discussion of principles and theory at the back of the book, so that the

reader would have the background of factual information upon which to place principles and generalities, and by omitting much discussion of anatomy, physiology and clinical medicine which are either repetitions of knowledge already acquired by the student, or for which, in the case of clinical discussions, the student is not prepared, and which the busy physician probably does not need. In spite of these faults, this is a very readable and informative volume, of value to student and practitioner alike. There are 1183 pages, 9 parts and 58 chapters.

* * *

ALLERGIC CHILD, THE. Harry Swartz, M.D., Coward-McCann, Inc., 210 Madison Avenue, New York, N. Y., 1954. 297 pages, \$3.95.

This is an informative, well-written book on many of the aspects of clinical allergy which will enlighten parents of allergic children, aiding their acceptance of the child's allergic status and of the necessary investigations and treatment to control the causes. The discussion of the nature of allergy, its frequency in the population, its origin in the body, and the refutation that most allergy is outgrown, that infants and young children are too young to treat, that desensitization in children is more dangerous than in adults, that allergic children are neurotic and usually highly intelligent, and other common misconceptions are especially helpful. Then the presentation of the ingestant, inhalant, drug, and infectant causes will increase the parents' knowledge. The discussion of the many gastrointestinal allergies and the urogenital, cerebral, musculo-skeletal, cardiovascular, ocular, aural, and other manifestations of allergy, as well as the usually emphasized nasobronchial and cutaneous symptoms, gives timely emphasis to the ubiquitous allergic reactivity in most body tissues which is still too often doubted or ignored.

The chapter on behavior problems arising from allergy will reassure parents of thus disturbed children. Its perusal should also encourage educators, child psychologists and advisors, pediatricians, and other physicians dealing with children to read the increasing literature on this result of cerebral and chronic allergy. Allergic toxemia and fatigue occur in all ages. The chapters on the methods of study and treatment discuss accepted procedures, variations of which, of course, exist in various clinics and practices of allergists.

Throughout the book, there is a tendency to present moot ideas as accepted opinions, which is difficult to avoid in a brief treatise written for lay people. Many allergists and physicians will disagree with the emphasis on the emotional aspects of allergy and the idea that some symptoms and attitudes arise from the child's craving and out-reaching for love and affection. The writer has observed many children who "have changed from little devils to little saints" with the control of food and/or inhalant allergy, with no attention to psychology influences. Failure to attribute symptoms, however, to mother rejection will relieve and please most allergists. From the parents' viewpoint, Chapter I could have been briefer and included in the section on therapy so that the intriguing early studies on experimental and clinical allergy other than those of the pioneer Richet could have been discussed in the author's pleasing manner.

* * *

WHY WE BECAME DOCTORS. Edited by Noah Fabricant, M.D. Grune & Stratton, New York, 1954. 182 pages, \$3.75.

This is a thoroughly delightful book consisting of a series of fifty short articles by men and women physicians, each telling why and how he became a doctor. The collec-

tion includes entertaining statements, well told, by such international figures as Walter B. Cannon, Somerset Maugham, Oliver Wendell Holmes, Benjamin Rush, Alice Hamilton, Evarts Graham, Stanley Cobb, and a host of others.

Motivation ranges from a desire to do good in the world by a life dedicated to the relief of suffering and the improvement of mankind to such incidents as a great respect for the family physician, a desire to learn more about illness in the family, one who was fascinated as a boy by a preserved specimen of the human brain, to a few who had the decision made for them by their elders. I did not find anything in these fascinating statements that will improve methods of selection of today's applicants for admission to our medical schools but they tell some of the reasons why outstanding doctors made their decisions.

Recommended highly for everyone.

* * *

CURRENT THERAPY—1954—Latest Approved Methods of Treatment for the Practicing Physician. Edited by Howard F. Conn, M.D. W. B. Saunders Company, Philadelphia, 1954. 898 pages, \$11.00.

This is the sixth edition of a highly successful annual series on therapeutics. In the plan of the book, it is assumed that the diagnosis has already been made before recourse is had to this volume. This limits the diagnostic discussion and, to a certain extent, the discussion of the management of individual cases.

The contributors include a great number of authors with a large variety of concepts regarding what constitutes adequately informative instruction. This makes for a wide variance in the quality and quantity of the writing. For example, one author takes two and one-half pages to express what his fellow does in a scant half page. And, as the editor states, no editorial judgment is expressed when different conceptions of a single disease are offered or different views of therapy are given by two authors for a specific disease (although some of the opinions may be of doubtful worth).

(The reviewer wonders, incidentally, why the words "method of" must be repeated several hundred times to emphasize the obvious before the name of each contributor.)

Despite these mild snipings, the reviewer feels that this is a valuable, although necessarily limited book for the practitioner or student to have on his shelf to use as a ready reference for his problems of therapy.

* * *

GLANDULAR PHYSIOLOGY AND THERAPY—5th ed. Prepared under the auspices of the Council on Pharmacy and Chemistry of the American Medical Association. J. B. Lippincott Company, 1954. 611 pages, \$10.00.

This book is much enlarged and completely different from previous editions. Rather than a collection of many papers as before, there are now 22 sections by prominent workers. There is still the deficient integration which is common to many works with numerous contributors. As in most endocrinologic texts, sections are devoted to each of the endocrine glands (the posterior pituitary being one of the longest). In addition, there are sections on Physiology of Menstruation and Ovulation as well as Pregnancy and Lactation. Abnormalities of body weight, sexual behavior, behavior and intelligence are discussed. Endocrine management of neoplastic diseases is reviewed. A short chapter on common misconceptions in endocrine therapy is very enlightening. Forsham's section on diagnostic aids is in itself a short course in endocrinology. There is a fairly lengthy bibliography following each chapter, but the references are generally from 1952 or before and suggest a delay in publication. This book may be recommended to the general physician and medical student.

MEDICAL JURISPRUDENCE

Chiropractors and the Federal Food and Drug Act

PEART, BARATY & HASSARD, of the California Bar

IN THE CASE of the *United States vs. Twenty-two Devices*, each being labeled "Halox Therapeutic Generator," 98 Fed. Supp. 914, a proceeding was instituted by the United States under the Federal Food, Drug and Cosmetic Act seeking a decree condemning the 22 devices. The contention of the United States was that the generators were misbranded when introduced into interstate commerce in violation of law.

The generators were for the electrolysis of sodium chloride solution. The device was housed in a leatherette-covered plywood cabinet, its base being approximately 12 inches by 15 inches, and its height approximately 12 inches. At the front of the cabinet was a control panel. A glass jar was placed inside the cabinet which was partially filled with a saturated sodium chloride solution. Carbon electrodes extended into this solution. When the generator operated, electricity was carried to these electrodes. As a result of the electrolysis of the salt solution, chlorine gas was produced. A small fan blew a current of air through the jar and out through a rubber hose. Thus a mixture of air and chlorine gas went into the tube and this was administered to the person receiving the treatment known as "chlorine inhalation therapy."

The Halox Therapeutic Generator Company was owned by Reverend Roger Aull who also owned a second organization known as the "Father Aull Foundation," which promoted the distribution of these generators.

The machines were manufactured in New Mexico and transported from there to California. No written printed or graphic matter accompanied any of the generators. They were shipped to a chiropractor in California, licensed under the laws of the State of California.

The generators did not carry directions for use in compliance with the Federal Statute but it was contended that they were exempt on the theory that they were delivered to physicians to be dispensed

by physicians in their professional practice. (Devices delivered to a physician are exempt under the act.)

The court immediately discussed the difference between a chiropractor and a physician. It stated that a chiropractor "is one skilled in the art of healing, in a limited manner, although not one skilled in physic, since the latter term refers to the practice of medicine." It also pointed out that under California law a chiropractor is not entitled to use the term physician or other letters, prefixes or suffixes that would indicate that he is practicing a profession for which he is not licensed. The court concludes that "one who is licensed to practice chiropractic in the state of California is not a physician by virtue of such license."

The court further substantiates its position by saying that under the federal statute only those physicians are exempt who are licensed by law to administer or apply the drug or device in question. Thus under California law a chiropractor is only authorized to practice chiropractic as taught in chiropractic schools or colleges and also to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body, but is not authorized to practice medicine, surgery, osteopathy, dentistry or optometry, nor use any drug or medicine now or hereafter included in materia medica.

The court then adopted the definition of the practice of chiropractic found in *People vs. Fowler*, 32 Cal. App. Supp. 737, that "chiropractic is a system for the practice of adjusting the joints, especially at the spine, by hand, for the curing of disease." The final conclusion was that the chlorine gas inhalation therapy administered by the machines in this case does not fall within the meaning of "chiropractic" since it in no way involves the manipulation of joints by hand or otherwise.

Thus, the 22 devices were condemned and disposed of by destruction in accordance with the law.

Pro-Banthine®: For Anticholinergic Action in the Gastrointestinal Tract

Combined neuro-effector and ganglion inhibiting action of Pro-Banthine consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use¹ in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It

is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.

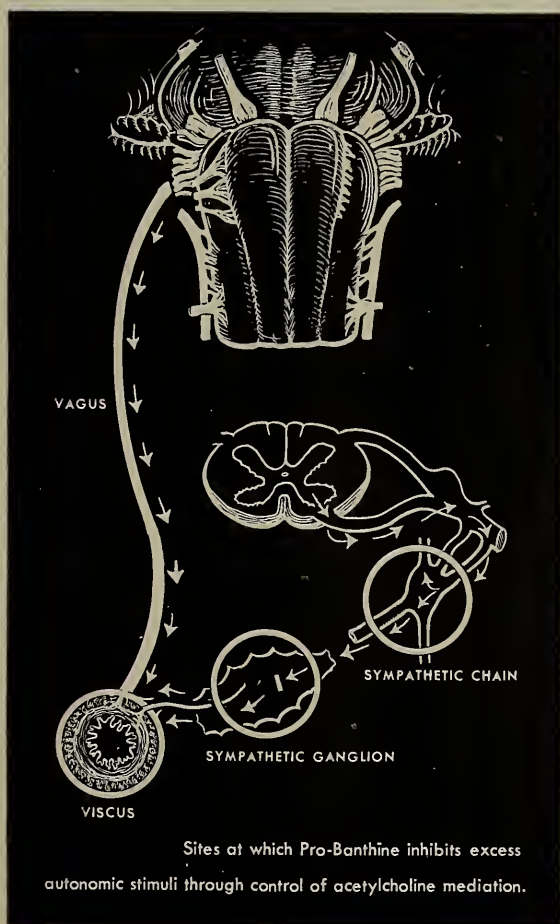
Roback and Beal² found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's² series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . ."

Pro-Banthine (β -diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.



1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: *Gastroenterology* 25:416 (Nov.) 1953.

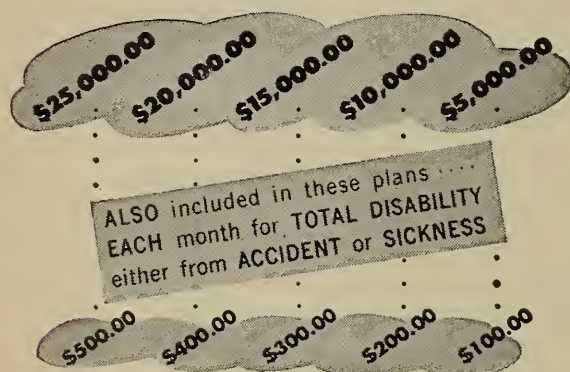
2. Roback, R. A., and Beal, J. M.: *Gastroenterology* 25:24 (Sept.) 1953.

Something NEW is Cooking



MORE INSURANCE NOW AVAILABLE

think! HOW THESE AMOUNTS
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Drug Acts Dramatically on Mentally Ill

Three California physicians recently reported "dramatic" results in treating mental patients with a new form of the old snakeroot remedy of India, *Rauwolfia serpentina*.

They said the drug, reserpine, is not a cure-all for mental illness but may prove to be "the most important therapeutic development in the history of psychiatry."

The drug quieted noisy, uncooperative patients, made them more adapted to psychiatric treatment, and largely replaced electroconvulsive therapy. It even seemed to bring about an "amazing" reorganization of patients' personalities, the doctors said. And it gave hospital technicians the hope and optimism so necessary for effective treatment. They were overjoyed at the prospect of becoming rehabilitation therapists instead of custodians.

Drs. Robert H. Noce and David B. Williams, Modesto, and Dr. Walter Rapaport, Sacramento, described their work in a recent issue of the *Journal of the American Medical Association*.

They treated 74 mentally ill patients with reserpine. About 80 per cent showed improvements attributable to the drug. Eight patients were discharged and 20 may be given leaves of absence. Reserpine also appeared to be of value to mentally retarded patients, 15 of whom were treated.

They said psychiatrists long have been seeking a safe method or agent that could help the mentally ill toward normalcy. Although "it seems incredible" that a drug could replace other treatment such as electroconvulsive therapy, they said they expect it to "revolutionize and facilitate modern psychiatric treatment."

The Indian plant has been used for centuries to treat mental illness, snake bite, anxiety, insomnia, and various other conditions. Its latest use has been to lower blood pressure in hypertensive patients. Recent claims by an Indian psychiatrist of high rates of recovery in the mentally ill led to this investigation.

For the study, the California men selected only "the so-called backward patients" who had been regarded as "hopeless." They came from wards containing many persons in seclusion and some in restraints or under heavy sedation. Patients were "raucous, hyperactive, combative, sarcastic, resistive, uncooperative," and the ward was "in constant turmoil." Tasks such as feeding, dressing, and bathing patients "were arduous and had a depressing effect on the personnel assigned to these wards."

Since the beginning of reserpine treatment, patients have undergone a change to "cooperative, friendly, cheerful, sociable, relatively quiet persons" who are better adapted to psychiatric treatment and rehabilitation. Most have gained weight and asked for assignment to work details.

(Continued on Page 56)



how many of your patients are eskimos?

Unless you are one of the handful of physicians in the Far North, you'll see an Eskimo only in adventure movies. In a way, it might be a welcome relief to examine a nose hardly ever affected by infectious and/or allergic conditions.

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*(Response in 254 of 302 patients¹⁻⁵)

1. Busis, S. N., and Friedmon, L. L.: *Antibiotics & Chemotherapy* 3:299, 1953. 2. Lozar, A. M., and Goldin, M.: *Eye, Ear, Nose & Throat Monthly* 32:512, 1953. 3. Cohen, B. M., and Mendelsohn, R.: *Laryngoscope* 63:1118, 1953. 4. Wittich, F. W.: *Ann. Allergy* 12:185, 1954. 5. Vickers, M. A.: *Laryngoscope* 64:632, 1954.

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Drug Acts Dramatically on Mentally Ill

(Continued from Page 52)

"Depressed patients become alert and sociable, while the hyperactive, noisy, assaultive group becomes tranquil," they said. "The use of restraints, seclusion and electroconvulsive therapy has decreased by at least 80 per cent since this study began (in October 1953)." There has been little difficulty with side-effects.

"Not only the patients have benefited but the ward technicians have adopted hopeful, optimistic attitudes, which are required for any positive and effective approach to therapy. They are overjoyed at the prospect of being converted from custodians to rehabilitation therapists," the doctors said.

"We cannot simply describe the effects of reserpine by confining them to the tranquilizing action of the drug. In addition, we believe that reorganization

of the personality is taking place in an amazing, rapid, satisfactory manner.

"It is still too early to say what the ultimate classification of all these patients will be, for it appears that the longer a patient takes reserpine the better the chance for response," they said.

DR. WILLIAM MCKINLEY THOMAS, a San Francisco physician, is the first Negro appointed to the National Advisory Mental Health Council of the National Institutes of Health. New members of the Special Medical Advisory Group of Veterans Administration include Drs. Wendell G. Scott of St. Louis, chairman, and Robert M. Sollinger, Columbus, Ohio, vice-chairman. Dr. Brian B. Blades of Washington, D. C., continues as secretary. The 20-man group advises the Veterans Administrator and the Chief Medical Director of VA.



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(Continued on Page 78)

Some Insect Fumigators May Be Dangerous

So-called insecticide fumigators promoted and advertised as completely safe are not harmless and should be used with "extreme care."

The Committee on Pesticides of the American Medical Association's Council on Pharmacy and Chemistry says that the trend toward misuse of fumigation vaporizers and toward making untrue claims for their safety appears to be growing. It warned in a recent issue of the *Journal of the American Medical Association* that chemicals in these devices can be dangerous if accidentally swallowed or even inhaled.

The committee has issued two previous warnings about using DDT or lindane preparations in occupied rooms, and many cities and states adopted measures to control sale and use of vaporizing devices. The committee also reported evidence of the hazards of continuously operating insecticide vapor dispensers and on the newer procedure of releasing vapors in higher concentrations into closed unoccupied rooms about every other week. Consumer complaints, letters from physicians, and a study of current advertising show that the warnings are being disregarded. Some accidents have been reported.

Advertisers have based their safety claims partly on animal experiments which showed the pesticides were fairly promptly eliminated by the body. However, the committee said these findings do not always apply exactly to the human body, and more recent experiments have indicated that lindane is retained in the brain and liver and may cause serious and lasting damage to the central nervous system.

Lindane, made in the form of pellets or as white crystals, is especially open to accidental misuse, as in the case of the mother who put some crystals into the sugar bowl by mistake. Four children who later drank a beverage sweetened with the contaminated sugar became ill and suffered convulsions. An 18-month-old baby who swallowed about one and a half tablets of lindane from a nationally advertised bug killer device became seriously ill with spasms despite immediate first aid, the committee reported.

It is "difficult to imagine" that promoters deliberately are ignoring the "dangerous implications of their suggestive advertising," the committee said. It is more likely that they merely are ignorant of the dangers of the insect-killing compounds, but "neither ignorance nor misplaced confidence is justification for questionable promotional tactics."

"Insecticide poisons that are effective because of deliberate continuous pollution of the atmosphere have questionable safety," the committee said. "Their use in this manner is contrary to hygienic standards for safe atmospheric living and working conditions."

"The committee wishes not only to reaffirm its

(Continued on Page 62)

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If you have prescribed rauwolfia in other forms, it will not take many patients to convince you that Rauwiloid serves better. Please write for clinical samples.

1. Klohs, M. W.; Draper, M. D., and Keller, F.: J. Am. Chem. Soc. 76:2843 (May 20) 1954.

2. Cronheim, G.; Brown, W.; Cawthorne, J.; Toekes, M. I., and Ungari, J.: Proc. Soc. Exper. Biol. & Med. 86:110 (May) 1954.

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Some Insect Fumigators May Be Dangerous

(Continued from Page 55)

opposition to the home use of continuously operating devices (insecticide vaporizers) but also to reemphasize its warning that extreme care is required in the intermittent use of such equipment promoted as so-called insecticide fumigators."

Committee secretary Bernard E. Conley said the committee's opposition was not aimed at the aerosol "bomb" type of spray operated by hand.

Brush Designed to Aid Cancer Diagnosis

A rotating brush for painless early diagnosis of cancer in the throat has been developed by a Miami, Fla., physician.

Dr. J. Ernest Ayre, of the Miami Cancer Institute, described the new instrument in a recent issue of the *Journal of the American Medical Association*. He said the brush could be used to collect cells for use in laboratory tests of visible growths in the

(Continued on Page 70)

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Physician Tells How to Avoid Ulcers

Anyone can get an ulcer. It's not a merit badge for the hard-working man, but a common disease that can strike anybody who doesn't take the trouble to avoid it.

The main strains that lead to ulcers are emotional, but most ulcers (if not all of them) can be warded off, according to Dr. John E. Eichenlaub, of the University of Minnesota School of Medicine. He tells how to avoid ulcers in a recent issue of *Today's Health*, published by the American Medical Association.

"There's nothing mysterious about an ulcer. It is a hole in the protective lining of the stomach or upper intestine," he said. "Through this hole, the acid and digestive juice made in the stomach wall eat at the tender underlying tissue.

"But this doesn't just happen. It's the end result of two physical and chemical changes."

The changes come from the stomach's overworking—making too much acid and juice; and from a loss of vitality in a patch of the stomach wall or upper intestine. Both these things happen mainly because of certain kinds of emotional stress.

Dr. Eichenlaub said the emotions you "swallow" are more important in causing ulcers than the ones you openly express. Resentment, feelings of being wronged or unappreciated, and insecurity are the biggest ulcer causers. These are especially abusive to your stomach if they are given no outlet in words or action.

"Avoiding these feelings, spreading them out so they don't pile insult upon insult in your stomach, and giving them healthy outlets are the keys to warding off an ulcer," he said. "These things, plus a few changes in your habits if your problems are many and hard to handle, will do the job."

He gave three rules for stopping an ulcer before it starts: First, steer clear of situations that cause these emotions. Say no to excessive demands by others. Second, change your attitudes about keeping it to yourself if somebody steps on your toes or asks too much of you. Sound off. Take it easy, do your best, and what you do will be good enough. Third, and most important, find outlets or antidotes for resentment, frustration, hurt, and inadequacy. Convert these feelings into action or air them in conversation.

Dr. Eichenlaub suggested smashing at a golf ball, beating a carpet, or entering into competitive sports and constructive hobbies to "work off" these bottled-up feelings. If you can't do this right away, make a mental note of something that upsets you, and work it off later.

"Two other simple steps are worth taking when stress is great, however," he said. "If you find tensions piling up on you, take a glass of milk. . . . And be sure to avoid those straws-that-break-the-camel's-back, excess alcohol and tobacco, at times of extreme stress."



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*Aaron, H.: Weight Control, Consumer Reports 17:100 (Feb.) 1952.



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Niacinamide	20 mg.	Iron	3.33 mg.		

Brush Designed to Aid Cancer Diagnosis

(Continued from Page 62)

throat. The diagnosis of cancer of the voice organ now depends on surgical removal of cells.

"The need for a screening method for early cancer of the throat has been emphasized by recent publicity on the importance of ruling out malignancy in heavy smokers suffering from throat irritation," Dr. Ayre said. "It is suggested that a simple technique such as that described here may play a useful role in annual cancer examinations and in examination of patients suffering prolonged hoarseness or throat irritation."

Dr. Ayre said the instrument has a retractable brush and is curved to fit the throat. The bristles sweep rapidly in full circle and collect a rich concentration of cells. The procedure is so rapid that irritation is brief and no anesthetic is needed.

The most common type of malignancy in the throat is cancer of the outer layers of skin, he said. Patients may suffer chronic hoarseness, cough and bleeding; chronically inflamed, reddened patches on the vocal cords that appear innocent may be early cancer. These persons should be observed closely, and the new instrument will help early diagnosis, Dr. Ayre said.



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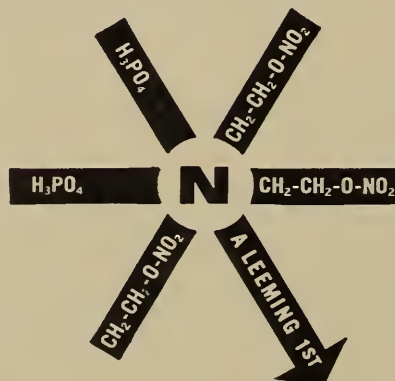
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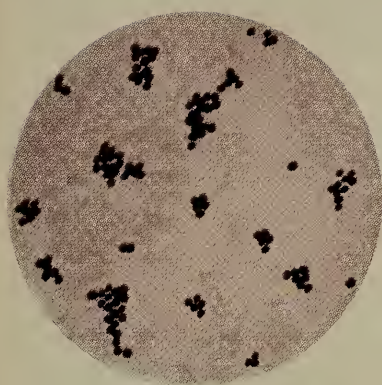
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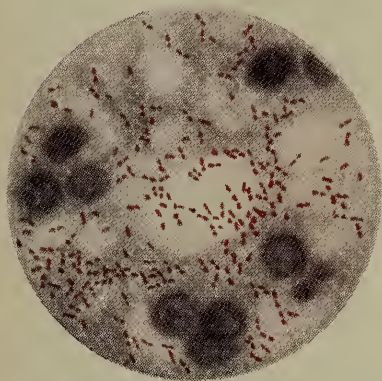
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Mango Fruit Can Cause Rash Like Poison Ivy

Persons who are especially sensitive to poison ivy should also watch out for the skin of mango fruit.

The mango, which has become so popular in recent years that it can be bought at almost any neighborhood fruit store, has been found to cause skin trouble, especially among persons who react strongly to poison ivy. Dr. Lawrence C. Goldberg, Cincinnati, reported on two such cases in a recent issue of the *Journal of the American Medical Association*.

However, he said mangoes can be eaten even by the most sensitive persons, if the fruit is carefully peeled and the skin is not eaten or handled.

The mango, which is shaped like an avocado and is orange-yellow-red when ripe, is a member of the same family as poison ivy, sumac, cashew and pistachio. On the fruit's thin skin can be seen varnish-like spots, containing cardol, which is much like the toxic substance of poison ivy. These spots come from the sap which comes off the tree stem when the fruit is picked.

Contact with cardol may cause an outbreak around the mouth of a rash that is usually bumpy and sometimes blistery. It always burns and itches. The rash also may break out on the fingers. Stomach and intestinal disorders sometimes result.



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(Continued from Page 58)

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Leading Child Killer Can Be Prevented

A "vaccine" is being prescribed for the major killer of children—accidents.

Between 11,000 and 13,000 children are killed each year, and 40,000 to 50,000 are permanently injured by accidents. Accidents cause more deaths of youngsters than the next five or six most important causes combined. But Dr. Harry F. Dietrich, Beverly Hills pediatrician, said that accidents—like diseases—can be prevented and treated with the right vaccine.

The vaccine consists of protection and education before the child even starts school, Dr. Dietrich stated in a recent issue of the *Journal of the American Medical Association*. It must be given at the preschool age because that is when a child's behavior and personality are shaped and it is also when one-half of all fatal accidents occur, he said.

"Up to the age of 12 to 18 months the infant needs complete protection from all accident hazards. If he is burned, drowned, crushed, poisoned, or mangled he has been denied that protection," Dr. Dietrich said. "... consider the child's situation at age 5 or 6 when school and play take him away from the protective devices of the home. His safety now depends on what he has learned. Whether or not he dashes blindly into the street, stumbles into a water-filled quarry, ignites a pile of rubbish, loses his arm in some power machinery, or drinks from a bottle filled with paint thinner, depends on what his parents taught him between the ages of 1 and 5.

"It must be apparent that after the age of one, protection must gradually be reduced and replaced by education. While still maintaining protection against subtle and incomprehensible hazards, parents must begin to teach the child to do safely all of the things he wants to do and is capable of doing.

"Protection is primarily intended to keep the child unharmed until he is able to be taught," he said. Children must learn to live safely "with, rather than without" such things as fire, machinery, electricity, and chemicals. The application of accident prevention in the home requires three tools: "forethought, time, and discipline."

In addition to home protection and education, Dr. Dietrich suggested improvements in adult education, accident prevention courses in medical schools, legislation, improvements in packaging and labeling insect poisons and medicines, and possible control of inflammability of children's clothing. But he said "even brief consideration of the motor vehicle accident situation will keep us from placing too great dependence on laws." The problem must be solved instead by the medical profession and parents, because of "the devastating toll that accidents are extracting each year."

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BETASYAMINE marks a significant advance in Hi-Energy Compound Replacement Therapy for the supportive management of such debilitating conditions as Anxiety Tension Fatigue Syndromes, Poliomyelitis, Multiple Sclerosis, Cardiovascular Disease, Muscular Dystrophy and other low energy states. As a balanced combination of immediate precursors of creatine,¹ Betasyamine accelerates formation and utilization of phosphocreatine,² storehouse of high physiologic energy.³ Because phosphocreatine levels have been found to be low in many debilitating diseases,⁴ replacement therapy with Betasyamine has been demonstrated clinically effective, both by objective and subjective improvement in a significant number of cases. In such patients, the ingestion of adequate amounts of Betasyamine for a minimum of three weeks has usually been followed by freedom from fatigue, a marked sense of well-being, greater energy output, improved articulation and ambulation, relief from anginal pain and dyspnea, more rapid progress during physiotherapy and during psychotherapy.^{5,6,7} Betasyamine is nontoxic and produces no untoward or artificially stimulating effects. In properly selected patients with low physiologic energy, Betasyamine response varies within individual limits, usually in proportion to dosage and length

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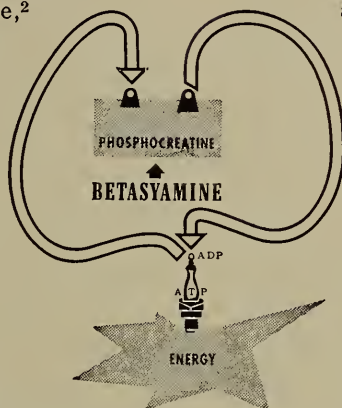
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BOOKS RECEIVED

BABCOCK'S PRINCIPLES AND PRACTICE OF SURGERY—2nd Ed. Edited by Karl C. Jonas, B.S., M.D., M.S. (Surg.), F.A.C.S., F.I.C.S., Department of Surgery, Temple University School of Medicine. Lea & Febiger, Philadelphia, 1954. 1543 pages, 1006 illustrations, and 10 colored plates, \$18.00.

DISEASES OF THE SKIN—For Practitioners and Students—4th ed. George Clinton Andrews, M.D., F.A.C.P., Clinical Professor of Dermatology, College of Physicians Columbia University. W. B. Saunders Company, Philadelphia, 1954. 877 pages, 777 illustrations, \$13.00.

FLUID THERAPY. James D. Hardy, M.S.(Chem.), M.D., F.A.C.S., Associate Professor of Surgery and Director of the Surgical Laboratories, Medical College of the University of Tennessee. Lea & Febiger, Philadelphia, 1954. 255 pages, \$5.50.

GALEN OF PERGAMON. George Sarton. University of Kansas Press, Lawrence, Kansas, 1954. 112 pages, \$2.50.

HUGH ROY CULLEN—A Story of American Opportunity. Ed Kilman and Theon Wright, Prentice-Hall, Inc., New York, 1954. 376 pages, \$4.00.

GERIATRIC NURSING—2nd ed. Kathleen Newton, R.N., M.A., Head, Out-Patient Nursing Service and Instruction, Cornell University-New York Hospital Medical Center. The C. V. Mosby Company, St. Louis, 1954. 424 pages, \$4.75.

GROWTH AND DEVELOPMENT OF CHILDREN—2nd ed. Ernest H. Watson, M.D., Professor, and George H. Lowrey, M.D., Assistant Professor, Department of Pediatrics and Communicable Diseases, University of Michigan Medical School. The Year Book Publishers, Inc., 200 East Illinois, Chicago, 1954. 296 pages, \$7.00.

HYPOTHYROIDISM: An Essay on Modern Medicine. Paul Starr, M.D., F.A.C.P., Professor of Medicine, University of Southern California School of Medicine. Charles C. Thomas, publisher, Springfield, 1954. 127 pages, \$3.75.

MANAGEMENT OF MENTAL DEFICIENCY IN CHILDREN, THE. I. Newton Kugelmass, B.S., M.A., M.D., Ph.D., Sc.D., Consultant, Department of Health and Hospitals, New York City; Consultant, Pediatrics, Heckscher Institute for Child Health, Monmouth Memorial Hospital, etc. Grune and Stratton, New York, 1954. 312 pages, \$6.75.

MANUAL OF ANTIBIOTICS—1954-1955. Prepared under the editorial direction of Henry Welch, Ph.D.; published by Medical Encyclopedia, Inc., 30 East 60th Street, New York 22, and distributed by American Pharmaceutical Association, 2215 Constitution Ave., N.W., Washington, D. C. 87 pages, \$2.50.

MYOCARDIAL INFARCTION—Its Clinical Manifestations and Treatment with Anticoagulants—A Study of 1031 Cases. Irving S. Wright, M.D., Charles D. Marple, M.D., and Dorothy Fahs Beck, Ph.D., Report of the Committee on Anticoagulants, American Heart Association. Published for the American Heart Association by Grune & Stratton, New York, 1954. 656 pages, \$8.50.

NERVOUSNESS, INDIGESTION AND PAIN—(Popular Ed.). Walter C. Alvarez, M.D., Emeritus Professor of Medicine, University of Minnesota (Mayo Foundation), Emeritus Consultant in the Division of Medicine, The Mayo Clinic. Harper & Brothers, New York, 1954. (Medical Edition, Paul B. Hoeber, Inc., 1943). 235 pages, \$3.50.

PRINCIPLES OF INTERNAL MEDICINE—2nd ed. T. R. Harrison, Raymond D. Adams, Paul B. Beeson, William H. Resnik, George W. Thorn, and M. M. Wintrobe. The Blakiston Company, Inc., 1954. 1703 pages, 87 pages of index. Student, 1-vol. ed., \$16.00. Professional 2-vol. ed., boxed, \$21.00.

SURGICAL TREATMENT OF CANCER OF THE CERVIX. Edited by Joe V. Meigs, M.D., Clinical Professor of Gynecology, Harvard Medical School. Grune and Stratton, New York, 1954. 462 pages, \$12.00.

Better Outlook Reported for Heart Sufferers

A multi-sponsored research project conducted in New York has resulted in a more optimistic picture for many victims of coronary thrombosis, the most common type of heart disease.

"Physicians and patients of the present generation are well aware that heart disease is the most common cause of death in the United States," the researchers said. "For many years victims of coronary disease have been instilled with a fear of sudden death or a dread of permanent invalidism; the ensuing psychological effects have seriously limited physicians in providing the proper care and rehabilitation."

The study on chances for survival for such patients was reported in a recent issue of the *Journal of the American Medical Association* by Drs. Henry I. Russek, Staten Island, N. Y., and Burton L. Zohman, Brooklyn. It showed that the death rate for "good risk" patients, who suffer mild first attacks, is even lower than the 5 per cent commonly recorded for pneumonia. It is lower than commonly believed in younger "poor risk" patients who suffer complicated attacks.

The study also showed that the outlook for "good risk" patients is equally favorable for patients of all ages.

The physicians studied the acute phase of heart attack in 1,318 patients. Of these, 611 qualified as having "uncomplicated" first attacks, and the mortality rate was only 3.4 per cent. However, for the majority of patients, who survived the first 48 hours, the rate dropped to 1.8 per cent. Seven hundred seven patients had signs indicating a poor general condition on admission to the hospital; the mortality rate among these was 60 per cent, with rates of 40.3 for patients over 60 and 29.5 for those under that age. The higher rate in older patients was due solely to the higher incidence of serious attacks with advancing years, and not to the influence of age on the individual case, the physicians said.

High mortality rates previously quoted for heart disease as a whole have created "the erroneous impression" that the outlook for heart attack sufferers is always grave regardless of the mildness or severity of the first attack, they said. Until now there has been little information on the chances for survival for patients with "uncomplicated" first attacks. The new information "justifies a more optimistic attitude than has usually been taken," the physicians said.

The project was sponsored by the National Heart Institute, the United States Public Health Service, the medical services of Kings County and Maimonides Hospitals, State University College of Medicine. Brooklyn. It was conducted at the college hospital in Brooklyn and the Cardiovascular Research Unit, U. S. Public Health Service Hospital, Staten Island.

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KEY TO ABBREVIATIONS USED

(Or.)—Original Article; (Ed.)—Editorial; (CMA)—California Medical Association; (CR)—Case Report; (I)—Information; (LE)—Letters to the Editor; (MJ) Medical Jurisprudence.

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